Transcript Exhibit(s)

Docket #(s): T-00000A-00-0194

Exhibit # : See attached Exhibit list for the Status of each Exhibit.

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HAND DELIVERED

August 2, 2001

Ms. Lyn Farmer
Chief Administrative Law Judge
ACC – HEARING DIVISION
1200 West Washington, 1st Floor
Phoenix, AZ 85007

Re: Qwest / Cost Docket Phase II No. T-00000A-00-0194

Dear Ms. Farmer:

Following is a breakdown of the original exhibits from the hearing held in the above-referenced matter that began on July 16, and ended on July 31, 2001:

ATT/XO Exhibits Nos. ATT/XO 1 through 43

Exhibits Nos. 1, 2, 3, 7, 9, 10, 18, 19, 20, 23, 26, 27, 31, 38, 39, 40, and 42 are being filed with Docket Control this date.

Confidential Exhibits Nos. 4, 5, 6, 8, 11, 12, 13, 14, 15, 16, 17, 21, 22, 24, 28, 29, 30, 32, 33, 34, 35, 36, 37, 41, and 43 are enclosed herewith.

Exhibit No. 25 was not offered, and is being returned to ATT/XO.

ATT/WorldCom Exhibits Nos. ATT/WorldCom 1 through 16

Exhibits Nos. 1 and 2 have not be provided to the court reporter by the party as of this date.

Exhibits Nos. 3, 4, 7, 9, 10, 11, 13, 14, 15, and 16 are being filed with Docket Control this date.

Confidential Exhibits Nos. 5, 6, 8, and 12 are enclosed herewith.

Cox Exhibits Nos. Cox 1 through 4

Exhibits Nos. 1, 2, and 4, are being filed with Docket Control this date.

Confidential Exhibit No. 3 is enclosed herewith.

Qwest Exhibits Nos. Qwest 1 through 36

Exhibits Nos. 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 27, 28, 30, 31, 32, 33, 34, 35, and 36, are being filed with Docket Control this date.

Confidential Exhibits Nos. 1, 3, 17, 25, 26, and 29 are enclosed herewith. Also, three boxes containing attachments to Teresa Million's exhibits.

Sprint Exhibits Nos. Sprint 1 through 4

Exhibits Nos. 2, 3, and 4, are being filed with Docket Control this date.

Confidential Exhibit No. 1 is enclosed herewith.

Staff Exhibits Nos. S 1 through 34

Exhibits Nos. 1, 2, 3, 4, 5, 8, 9, 16, 20, 24, 25, 26, 28, 29, 31, 33, and 34 are being filed with Docket Control, this date.

Confidential Exhibits Nos. 6, 7, 11, 13, 14, 15, 17, 18, 19, 21, 22, 23, 27, 30, and 32 are enclosed herewith.

Exhibits Nos. 10 and 12 were not offered, and are being returned to Staff.

WorldCom Exhibits Nos. WorldCom 1 through 18

Exhibits Nos. 1, 2, 3, 4, 7, 8, 9, 10, 11, 14, 15, 16, 17, and 18 are being filed with Docket Control, this date.

Please note that Exhibits Nos. 13, 14, 15 and 16 were inadvertently omitted from the index, but were identified (Pages 1228 and 1229) and admitted (Page 1230) during the testimony of Roy Lathrop on 07-20-2001.

Confidential Exhibits Nos. 5, 6, and 13 are enclosed herewith.

Exhibit No. 12 was not offered, and is being returned to WorldCom.

Z-Tel Exhibits Nos. Z-Tel 1 and 2

Exhibits Nos. 1 and 2 are being filed with Docket Control this date.

We are also returning the Docket File to Docket Control.

If you have any questions, or if we can be of any further assistance, please let us know.

Very truly yours,

Marta T. Hetzer
Administrator/Owner

Enclosures

Copy to: AT&T/XO
Legal Division, ACC
Michael Patten, Esq.
Sprint
Qwest
WorldCom
Docket Control

COPY FOR YOUR INFORMATION

QWEST

COST DOCKET

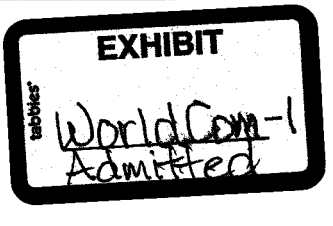
NO. T-00000A-00-0194

WorldCom ORIGINAL EXHIBITS

PUBLIC

Arizona Corporation Commission
Docket No. T-00000A-00-0194
Phase II, Qwest Corporation
Rebuttal Testimony
Exhibit MA-1R 2

		Recurring	Non- Recurring	Witness
6.0 Resale				
6.1 Wholesale Discount Rates				
6.1.1 Basic Exchange Residence	4.19%			Gude
6.1.2 Basic Exchange Business	9.41%			Gude
6.1.3 Toll	23.96%			Gude
6.1.4 Listings, CO Features and Informational Services	41.51%			Gude
6.1.5 Private Line	6.44%			Gude
6.1.6 Packaged/Special Services	10.46%			Gude
6.1.7 Proposed Operator Services/DA	7.00%			Gude
6.2 Customer Transfer Charge (CTC)				
6.2.1 CTC for POTS Service, Mechanized				
First			$0.68	Brotherson
Each Additional			$0.14	Brotherson
6.2.2 CTC for POTS Service, Manual				
First			$16.28	Brotherson
Each Additional			$2.71	Brotherson
6.2.3 CTC for Private Line Transport Service				
First			$41.05	Brotherson
Each Additional			$41.05	Brotherson
6.2.4 CTC for Advanced Communications Services, per circuit			$51.57	Brotherson
7.0 Interconnection				
7.1 Entrance Facilities				
7.1.1 DS1		$86.70	$219.79	Kennedy
7.1.2 DS3		$458.43	$416.07	Kennedy
7.2 LIS EICT				
7.2.1 EICT				
Per DS1		$0.00	$0.00	Kennedy
Per DS3		$0.00	$0.00	Kennedy
	Recurring Fixed	**Recurring Per Mile**	**Nonrecurring**	
7.3 Direct Trunked Transport				
7.3.1 DS1 Over 0 to 8 Miles	$31.14	$1.45		Kennedy
DS1 Over 8 to 25 Miles	$31.40	$1.18		Kennedy
DS1 Over 25 to 50 Miles	$31.87	$2.14		Kennedy
DS1 Over 50 Miles	$31.83	$1.12		Kennedy
7.3.2 DS3 Over 0 to 8 Miles	$197.32	$61.17		Kennedy
DS3 Over 8 to 25 Miles	$200.35	$18.78		Kennedy
DS3 Over 25 to 50 Miles	$184.41	$23.73		Kennedy
DS3 Over 50 Miles	$194.79	$16.34		Kennedy
		Recurring	**Nonrecurring**	
7.4 Multiplexing				
7.4.1 DS3 to DS1		$232.15		Kennedy
DS3 to DS1, Per Subsequent Channel			$268.62	Kennedy
7.5 Trunk Nonrecurring Charges				
7.5.1 DS1 Interface, First Trunk			$355.22	Kennedy
7.5.2 DS1 Interface, Each Additional Trunk			$5.93	Kennedy
7.5.3 DS3 Interface, First Trunk			$362.03	Kennedy
7.5.4 DS3 Interface, Each Additional Trunk			$12.75	Kennedy
7.5.5 DS1 Trunk Rearrangement			$177.61	Kennedy
7.5.6 DS1 Trunk Rearrangement, Each Additional			$2.97	Kennedy
7.5.7 DS3 Trunk Rearrangement			$181.02	Kennedy
7.5.8 DS3 Trunk Rearrangement, Each Additional			$6.38	Kennedy
7.6 Local Traffic				
7.6.1 End office call termination, per minute of use		$0.002143		Kennedy
7.6.2 Tandem Switched Transport				
7.6.2.1 Tandem Switching, per Minute of Use		$0.001589		Kennedy
	Recurring Fixed	**Recurring Per Mile**	**Nonrecurring**	



		Recurring	Non- Recurring	Witness
7.6.2.2 Tandem Transmission, per Minute of Use, All Mileage Bands				
0 to 8 Miles	$0.000456	$0.0000428		
8 to 25 Miles	$0.000465	$0.0000212		
25 to 508 Miles	$0.000448	$0.0000109		
Over 50 Miles	$0.000433	$0.0000039		
		Recurring	Nonrecurring	
7.7 Miscellaneous Charges				
7.7.1 Cancellation Charge (LIS Trunks)	Qwest's Arizona Switched Access Tariff Section 5.2.3 + LIS NRC			Kennedy
7.7.2 Expedite Charge (LIS Trunks)	Qwest's Arizona Switched Access Tariff Section 5.2.2 + LIS NRC			Kennedy
7.7.3 Construction Charges		ICB	ICB	Kennedy
7.8 Transit Traffic				
7.8.1 Exchange Service (EAS/Local) Transit	See Tandem Switching and Tandem Transmission Rates Above			
	9	Miles		
7.8.2 IntraLATA Toll	Qwest's Arizona Switched Access Tariff			
	9	Miles		
7.8.3 Jointly Provided Switched Access	Qwest's Arizona Switched Access Tariff			
7.8.4 Category 11 Mechanized Record Charge, per Record		$0.001827		Kennedy
8.0 Collocation				
8.1 All Collocation				
8.1.1 Collocation Entrance Facility, per fiber pair				
Standard Shared per Fiber		$16.01	$627.99	Kennedy
Cross Connect per Fiber		$16.17	$735.39	Kennedy
Express per Cable		$276.84	$9,198.71	Kennedy
8.1.2 Cable Splicing				
Fiber - Per set-up			$476.82	Kennedy
Per fiber spliced			$38.12	Kennedy
8.1.3 -48 Volt DC Power Usage, per Ampere, per Month				
Power Plant		$10.94		Kennedy
Power Usage Less Than 60 Amps, per Amp		$3.70		Kennedy
Power Usage More Than 60 Amps, per Amp		$7.41		Kennedy
8.1.4 AC Power Feed (backup)				
8.1.4.1 AC Power Feed – per Amp, per Month				
120 V		$19.03		Kennedy
208 V, Single Phase		$32.98		Kennedy
208 V, Three Phase		$57.06		Kennedy
240 V, Single Phase		$38.06		Kennedy
240 V, Three Phase		$65.84		Kennedy
480 V, Three Phase		$131.68		Kennedy
8.1.4.2 AC Power Cable – per Foot				
20 Amp, Single Phase		$0.0117	$8.02	Kennedy
20 Amp, Three Phase		$0.0145	$9.94	Kennedy
30 Amp, Single Phase		$0.0126	$8.64	Kennedy
30 Amp, Three Phase		$0.0173	$11.87	Kennedy
40 Amp, Single Phase		$0.0149	$10.16	Kennedy
40 Amp, Three Phase		$0.0204	$13.99	Kennedy
50 Amp, Single Phase		$0.0176	$12.06	Kennedy
50 Amp, Three Phase		$0.0246	$16.84	Kennedy
60 Amp, Single Phase		$0.0199	$13.63	Kennedy
60 Amp, Three Phase		$0.0283	$19.38	Kennedy
100 Amp, Single Phase		$0.0247	$16.88	Kennedy
100 Amp, Three Phase		$0.0385	$26.36	Kennedy
8.1.5 Inspector Labor, per half hour				
Regular Hours Rate			$32.03	Kennedy
After Hours Rate, minimum 3 hours			$41.25	Kennedy
8.1.6 Channel Regeneration				

		Recurring	Non- Recurring	Witness
DS1 Regeneration		$1.97	$480.53	Kennedy
DS3 Regeneration		$6.09	$1,817.89	Kennedy
8.1.7 Collocation Terminations				
8.1.7.1 DS0				
Cable Placement per 100 pair Block		$0.48	$244.42	Kennedy
Cable Placement per Termination		$0.01	$4.59	Kennedy
Cable per 100 Pair Block		$0.62	$314.40	Kennedy
Cable per Termination		$0.01	$4.31	Kennedy
Blocks per 100 Pair Block		$1.08	$548.18	Kennedy
Blocks per Termination		$0.01	$7.51	Kennedy
Block Placement Per 100 Pair Block		$0.50	$253.50	Kennedy
Block Placement per Termination		$0.01	$3.47	Kennedy
8.1.7.2 DS1				
Cable Placement per 28 DS1s		$0.59	$406.52	Kennedy
Cable Placement per Termination		$0.06	$43.71	Kennedy
Cable per 28 DS1s		$0.53	$362.96	Kennedy
Cable per Termination		$0.06	$39.03	Kennedy
Panel per 28 DS1s		$0.61	$414.16	Kennedy
Panel per Termination		$0.07	$50.00	Kennedy
Panel Placement per 28 DS1s		$0.13	$86.74	Kennedy
Panel Placement per Termination		$0.01	$9.33	Kennedy
8.1.7.3 DS3				
Cable Placement per Termination		$0.24	$165.51	Kennedy
Cable per Termination		$0.34	$234.38	Kennedy
Connector per Termination		$0.35	$241.50	Kennedy
Connector Placement per Termination		$0.04	$24.92	Kennedy
8.1.8 Security				
Access Card per Employee		$0.86		Kennedy
Card Access per employee, per Office		$7.90		Kennedy
Central Office Security Infrastructure		ICB	ICB	Kennedy
8.1.9 Central Office Clock Synchronization				
Synchronization – Composite Clock, per Port		$7.42		Kennedy
8.1.10 Space Availability Report, Per Office			$335.01	Kennedy
8.2 Virtual Collocation				
8.2.1 Quote Preparation Fee			$4,399.84	Kennedy
8.2.2 Maintenance Labor, per half hour				
Regular Hours Rate			$28.10	Kennedy
After Hours Rate			$37.60	Kennedy
8.2.3 Training Labor, per half hour				
Regular Hours Rate			$28.10	Kennedy
8.2.4 Equipment Bay -recurring, per shelf		$3.61		Kennedy
8.2.5 Engineering Labor, per half hour				
Regular Hours Rate			$32.03	Kennedy
After Hours Rate			$41.25	Kennedy
8.2.6 Installation Labor, per Half Hour				
Regular Hours Rate			$30.31	Kennedy
After Hours Rate			$39.13	Kennedy
8.2.7 Floor Space Lease, per Square Foot		$3.69		Kennedy
8.2.8 -48 Volt DC Power Cables				
20A Power Feed, Per Feed		$8.11	$5,552.65	Kennedy
30A Power Feed, Per Feed		$9.27	$6,343.97	Kennedy
40A Power Feed, Per Feed		$11.31	$7,739.80	Kennedy
60A Power Feed, Per Feed		$14.11	$9,655.97	Kennedy
8.3 Cageless Physical Collocation				

		Recurring	Non- Recurring	Witness
8.3.1 Quote Preaparation Fee			$4,399.84	Kennedy
8.3.2 Space Construction				
Bays and 1 - 40A Power Feed - 90 Day		$43.77	$29,953.55	Kennedy
Adjustment for 20A Initial Power Feed		($3.20)	($2,187.15)	Kennedy
Adjustment for 30A Initial Power Feed		($2.04)	($1,395.83)	Kennedy
Adjustment for 60A Initial Power Feed		$2.80	$1,916.17	Kennedy
Adjustment for Each Additional Bay		$4.44	$3,038.06	Kennedy
Each Additional 20A Power Feed		$8.11	$5,552.65	Kennedy
Each Additional 30A Power Feed		$9.27	$6,343.97	Kennedy
Each Additional 40A Power Feed		$11.31	$7,739.80	Kennedy
Each Additional 60A Power Feed		$14.11	$9,655.97	Kennedy
8.3.3 Floor Space Lease, per Square Foot		$3.69		Kennedy
8.4 Caged Physical Collocation				
8.4.1 Quote Preparation Fee			$4,783.90	Kennedy
8.4.2 Space Construction				
Cage- Up to 100 Sq. Ft and 1 - 60A Power Feed		$75.84	$51,901.16	Kennedy
Cage - 101- 200 Sq. Ft and 1 - 60A Power Feed		$78.70	$53,858.34	Kennedy
Cage- 201- 300 Sq. Ft. and 1 - 60A Power Feed		$80.92	$55,380.28	Kennedy
Cage- 301- 400 Sq. Ft. and 1- 60A Power Feed		$83.71	$57,287.56	Kennedy
Adjustment for 20A Initial Power Feed		($12.39)	($8,481.43)	Kennedy
Adjustment for 30A Initial Power Feed		($11.28)	($7,721.61)	Kennedy
Adjustment for 40A Initial Power Feed		($8.96)	($6,133.10)	Kennedy
Adjustment for 100A Initial Power Feed		$13.72	$9,389.08	Kennedy
Adjustment for 200A Initial Power Feed		$43.80	$29,974.50	Kennedy
Adjustment for 300A Initial Power Feed		$80.36	$54,995.90	Kennedy
Adjustment for 400A Initial Power Feed		$123.60	$84,587.92	Kennedy
Each Additional 20A Power Feed		$10.24	$7,004.36	Kennedy
Each Additional 30A Power Feed		$11.35	$7,764.18	Kennedy
Each Additional 40A Power Feed		$13.67	$9,352.68	Kennedy
Each Additional 60A Power Feed		$22.63	$15,485.78	Kennedy
Each Additional 100A Power Feed		$36.35	$24,874.87	Kennedy
Each Additional 200A Power Feed		$66.43	$45,460.29	Kennedy
Each Additional 300A Power Feed		$102.99	$70,481.68	Kennedy
Each Additional 400A Power Feed		$146.23	$100,073.71	Kennedy
8.4.3 Floor Space Lease, per Square Foot		$3.69		Kennedy
8.4.4 Grounding				
2/0 AWG - per foot		$0.02	$12.65	Kennedy
1/0 AWG - per foot		$0.03	$21.05	Kennedy
4/0 AWG - per foot		$0.03	$23.92	Kennedy
350 kcmil - per foot		$0.05	$33.18	Kennedy
500 kcmil - per foot		$0.05	$36.97	Kennedy
750 kcmil – per foot		$0.08	$56.65	Kennedy
8.5 CLEC to CLEC				
8.5.1 Flat Charge (Design Engineering & Installation – No			$791.63	Kennedy
8.5.2 Cable Racking, Per Foot				
DS0		$0.17261		Kennedy
DS1		$0.18290		Kennedy
DS3		$0.15906		Kennedy
8.5.3 Virtual Connections (Connections only No cables)				
DS0 (Per 100 Connections)			$224.01	Kennedy
DS1 (Per 28 Connections)			$102.17	Kennedy
DS3 (Per 1 Connection)			$8.84	Kennedy
8.5.4 Cable Hole (if Applicable)			$442.49	Kennedy
8.5.5 CLEC to CLEC Cross Connection			$256.37	Kennedy
8.6 ICDF Collocation			ICB	Kennedy
8.7 Adjacent and Adjacent Remote Collocation			ICB	Kennedy

		Recurring	Non- Recurring	Witness
8.8 Remote Collocation		Under Development		Kennedy
8.9 Space Optioning		Under Development		Kennedy
8.10 Space Reservation			25% of Collocation Charge	
9.0 Unbundled Network Elements (UNEs)				
9.1 Interconnection Tie Pairs (ITP) – Per Termination				
DS0		$0.48		Kennedy
DS1		$1.52		Kennedy
DS3		$15.33		Kennedy
9.2 Unbundled Loops				
9.2.1 Analog Loops				
9.2.1.1 2-Wire Voice Grade		See Installation options, Section 9.2.4		
Zone 1		$16.89		Kennedy
Zone 2		$22.57		Kennedy
Zone 3		$34.34		Kennedy
9.2.1.1.1 Unbundled Loop Grooming (2-wire)		$1.59		Kennedy
9.2.1.2 4-Wire Voice Grade		See Installation options, Section 9.2.4		
Zone 1		$33.76		Kennedy
Zone 2		$45.12		Kennedy
Zone 3		$68.66		Kennedy
9.2.1.2.1 Unbundled Loop Grooming (4-wire)		$3.64		Kennedy
9.2.2 Non-loaded Loops				
9.2.2.1 2-wire Non-loaded Loop		See Installation options, Sections 9.2.4 and See also Section 9.2.2.3		
Zone 1		$16.89		Kennedy
Zone 2		$22.57		Kennedy
Zone 3		$34.34		Kennedy
9.2.2.2 4-wire Non-loaded Loop		See Installation options, Sections 9.2.4 and See also Section 9.2.2.3		
Zone 1		$33.76		Kennedy
Zone 2		$45.12		Kennedy
Zone 3		$68.66		Kennedy
9.2.2.3 Cable Unloading/Bridge Tap Removal			$652.83	Kennedy
9.2.3 Digital Capable Loops				
9.2.3.1 Basic Rate ISDN / xDSL -I Capable / ADSL Compatible Loops		See Installation options, Sections 9.2.4 and See also Section 9.2.2.3		
Zone 1		$16.89		Kennedy
Zone 2		$22.57		Kennedy
Zone 3		$34.34		Kennedy
9.2.3.2 DS1 Capable Loop		See Installation options, Sections 9.2.5		
Zone 1		$84.48		Kennedy
Zone 2		$84.57		Kennedy
Zone 3		$91.39		Kennedy
9.2.3.3 DS3 Capable Loop		See Installation options, Sections 9.2.6		
Zone 1		$897.72		Kennedy
Zone 2		$899.73		Kennedy
Zone 3		$1,053.66		Kennedy
9.2.3.4 2-Wire Extension Technology		$4.13		Kennedy
9.2.3.4.1 Unbundled Loop Grooming- 2-wire Extension Technology		$1.60		Kennedy

		Recurring	Non-Recurring	Witness
9.2.4	Loop Installation Charges for 2 and 4 wire analog, 2 and 4 wire non-loaded, ADSL Compatible, ISDN BRI Capable and xDSL - I Capable Loops where conditioning is not required.	See related monthly recurring charges in Sections 9.2.1 – 9.2.3 above. (If conditioning is required, charges may apply as specified in Section 9.2.2.3 above).		
9.2.4.1	Basic Installation			
	First		$88.29	Kennedy
	Each Additional		$76.07	Kennedy
9.2.4.2	Basic Installation with Performance Testing			
	First Loop		$192.29	Kennedy
	Each Additional		$137.97	Kennedy
9.2.4.3	Coordinated Installation with Cooperative Testing			
	First Loop		$232.25	Kennedy
	Each Additional		$137.97	Kennedy
9.2.4.4	Coordinated Installation without Cooperative Testing			
	First Loop		$95.38	Kennedy
	Each Additional		$83.16	Kennedy
9.2.4.5	Basic Install with Cooperative Testing			
	First Loop		$192.29	Kennedy
	Each Additional		$137.97	Kennedy
9.2.5	DS1 Loop Installation Charges	See related monthly recurring charges in Sections 9.2.1 – 9.2.3 above.		
9.2.5.1	Basic Installation			
	First Loop		$144.15	Kennedy
	Each Additional		$110.79	Kennedy
9.2.5.2	Basic Installation with Performance Testing			
	First Loop		$278.18	Kennedy
	Each Additional		$203.72	Kennedy
9.2.5.3	Coordinated Installation with Cooperative Testing			
	First Loop		$318.14	Kennedy
	Each Additional		$203.72	Kennedy
9.2.5.4	Coordinated Installation without Cooperative Testing			
	First Loop		$153.26	Kennedy
	Each Additional		$119.90	Kennedy
9.2.5.5	Basic Install With Cooperative Testing			
	First Loop		$278.18	Kennedy
	Each Additional		$203.72	Kennedy
9.2.6	DS3 Loop Installation Charges	See related monthly recurring charges in Sections 9.2.1 – 9.2.3 above.		
9.2.6.1	Basic Installation			
	First Loop		$144.15	Kennedy
	Each Additional		$110.79	Kennedy
9.2.6.2	Basic Installation with Performance Testing			
	First Loop		$278.18	Kennedy
	Each Additional		$203.72	Kennedy
9.2.6.3	Coordinated Installation with Cooperative Testing			
	First Loop		$318.14	Kennedy
	Each Additional		$203.72	Kennedy
9.2.6.4	Coordinated Installation without Cooperative Testing			
	First Loop		$153.26	Kennedy
	Each Additional		$119.90	Kennedy

		Recurring	Non- Recurring	Witness
9.2.6.5 Basic Install With Cooperative Testing				
First Loop			$278.18	Kennedy
Each Additional			$203.72	Kennedy
9.3 Subloop				
9.3.1 2-Wire Analog & Non Loaded Distribution Loop			$121.43	Kennedy
Zone 1		$12.12		Kennedy
Zone 2		$17.33		Kennedy
Zone 3		$29.72		Kennedy
				Kennedy
9.3.2 Each Addl 2 -Wire Analog & Non Loaded Distribution Loop			$55.50	Kennedy
9.3.3 Intrabuilding Cable Loop, Per Pair		$1.19		Kennedy
9.3.4 DS1 Capable Feeder Loop				
First Loop			$293.36	Kennedy
Each Additional			$219.50	Kennedy
Zone 1		$72.62		Kennedy
Zone 2		$72.71		Kennedy
Zone 3		$79.53		Kennedy
9.3.5 Field Connection Point				
Feasibility Fee/Quote Preparation Fee			$1,638.81	Kennedy
Construction Fee			ICB	Kennedy
9.4 Line Sharing				
9.4.1 Shared Loop, per Loop		$5.00	$37.71	Brohl
9.4.2 OSS - Per Line - Per Month		$2.68		Albersheim
9.4.3 Reclassification Charge			ICB	Brohl
9.4.4 Splitter Shelf Charge		$4.77	$537.89	Brohl
9.4.5 Splitter TIE Cable Connections				
Splitter in the Common Area--Data to 410 block		$5.82	$3,189.86	Brohl
Splitter in the Common Area—Data direct to CLEC		$6.11	$3,347.79	Brohl
Splitter on the IDF—Data to 410 block		$1.85	$1,015.26	Brohl
Splitter on the IDF—Data direct to CLEC		$3.47	$1,900.90	Brohl
Splitter on the MDF—Data to 410 block		$1.91	$1,044.37	Brohl
Splitter on the MDF—Data direct to CLEC		$4.09	$2,242.86	Brohl
9.4.6 POTS Splitter Charge – Per Splitter	Pass Through Charge to CLEC			Brohl
9.4.7 Engineering			$1,280.21	Brohl
9.5 Network Interface Device (NID)		$1.39	$68.79	Kennedy

	Recurring Fixed	Recurring Per Mile	Nonrecurring	
9.6 Unbundled Dedicated Interoffice Transport (UDIT)				
9.6.1 DS0 UDIT			$307.95	Kennedy
DS0 Over 0 to 8 Miles	$19.27	$0.13		Kennedy
DS0 Over 8 to 25 Miles	$19.29	$0.12		Kennedy
DS0 Over 25 to 50 Miles	$19.33	$0.12		Kennedy
DS0 Over 50 Miles	$19.28	$0.06		Kennedy
9.6.2 DS1 UDIT			$352.92	Kennedy
DS1 Over 0 to 8 Miles	$31.14	$1.45		Kennedy
DS1 Over 8 to 25 Miles	$31.40	$1.18		Kennedy
DS1 Over 25 to 50 Miles	$31.87	$2.14		Kennedy
DS1 Over 50 Miles	$31.83	$1.12		Kennedy
9.6.3 DS3 UDIT			$352.92	Kennedy
DS3 Over 0 to 8 Miles	$197.32	$61.17		Kennedy
DS3 Over 8 to 25 Miles	$200.35	$18.78		Kennedy
DS3 Over 25 to 50 Miles	$184.41	$23.73		Kennedy
DS3 Over 50 Miles	$194.79	$16.34		Kennedy
9.6.4 OC-3 UDIT			$352.92	Kennedy
OC-3 Over 0 to 8 Miles	$655.37	$205.64		Kennedy
OC-3 Over 8 to 25 Miles	$660.44	$66.12		Kennedy

		Recurring	Non- Recurring	Witness
OC-3 Over 25 to 50 Miles	$633.02	$86.07		Kennedy
OC-3 Over 50 Miles	$650.60	$60.95		Kennedy
9.6.5 OC-12 UDIT			$352.92	Kennedy
OC-12 Over 0 to 8 Miles	$1,837.87	$97.75		Kennedy
OC-12 Over 8 to 25 Miles	$1,837.87	$94.58		Kennedy
OC-12 Over 25 to 50 Miles	$1,837.87	$106.76		Kennedy
OC-12 Over 50 Miles	$1,837.87	$122.10		Kennedy
9.6.6 OC-48 and above	Under Development			
		Recurring	Nonrecurring	
9.6.7 DS0 UDIT Low Side Performance		$11.52		Kennedy
9.6.8 Multiplexing				
DS3 to DS1		$232.15	$2,569.47	Kennedy
DS1 to DS0, High Side		$210.68	$273.68	Kennedy
DS1 to DS0, Low Side		$7.35	$239.83	Kennedy
9.6.9 Extended Unbundled Dedicated Interoffice Transport				
DS1 E-UDIT		$55.78	$411.42	Kennedy
DS3 E-UDIT		$317.26	$411.42	Kennedy
OC-3 E-UDIT		$692.68	$411.42	Kennedy
OC-12 E-UDIT		$1,301.75	$411.42	Kennedy
9.6.10 UDIT Rearrangement				
DS0 Single Office			$219.07	Kennedy
DS0 Dual Office			$176.26	Kennedy
High Capacity Single Office			$266.02	Kennedy
High Capacity Dual Office			$238.39	Kennedy
9.7 Unbundled Dark Fiber (UDF)				
9.7.1 Single Strand Increments		Under Development		
9.7.2 Initial Records Inquiry (IRI)				
Simple			$159.49	Kennedy
Complex			$203.37	Kennedy
9.7.3 Field Verification and Quote Preparation (FVQP)			$1,485.33	
				Kennedy
9.7.4 Field Verification		Under Development		Kennedy
9.7.5 UDF-IOF Charges				
Order Charge per 1st Pair or Strand/Route/Order			$563.63	Kennedy
Order Charge ea. Addl. Pair or Strand /Same Route			$271.89	Kennedy
Termination, Fixed Per Pair./Office		$6.77		Kennedy
Fiber Transport, per Mile / Pair		$83.07		Kennedy
Fiber Cross-Connect Per Pair		$4.03	$21.56	Kennedy
9.7.6 UDF-Loop Charges				
Order Charge per 1st Pair or Strand /Route/Order			$563.63	Kennedy
Order Charge each. Addl. Pair or Strand/Same Route			$271.89	Kennedy
Termination, Fixed Per Pair/Office		$7.01		Kennedy
Termination, Fixed Per Pair/Prem		$6.42		Kennedy
Fiber Loop, per Route/Per Pair		$110.86		Kennedy
Fiber Cross-Connect Per Pair		$4.03	$21.56	Kennedy
9.7.7 Extended Unbundled Dark Fiber (E-UDF)				
Order Charge per 1st Pair or Strand /Route/Order			$563.63	Kennedy
Order Charge each. Addl. Pair or Strand/Same Route			$271.89	Kennedy
Termination, Fixed Per Pair/Office		$7.01		Kennedy
Termination, Fixed Per Pair/Prem		$6.42		Kennedy
Fiber Transport, per Route/Per Pair		$110.86		Kennedy
Fiber Cross-Connect Per Pair		$4.03	$21.56	Kennedy
9.8 Shared Transport, per minute of use		$0.0015190		Brohl
9.9 Unbundled Customer Controlled Rearrangement Element (UCCRE)				

		Recurring	Non- Recurring	Witness
9.9.1	DS1 Port	ICB	ICB	Brohl
9.9.2	DS3 Port	ICB	ICB	Brohl
9.9.3	Dial Up Access	ICB		Brohl
9.9.4	Attendant Access	ICB		Brohl
9.9.5	Virtual Ports		ICB	Brohl
9.10 Local Tandem Switching				
9.10.1	DS1 Local Message Trunk Port - Per Order	$56.98	$220.95	Brohl
9.10.2	DS1 Trunk Group – First Trunk - Per Order		$211.06	Brohl
9.10.3	DS1 Trunk Group – Each Additional Trunk - Per Order		$24.29	Brohl
9.10.4	Per Minute of Use	$0.002376		Brohl
9.11 Local Switching				
9.11.1	Analog Line Side Port, First Port	$1.28	$145.57	Brohl
9.11.2	Analog Line Side Port, Each Additional	$1.28	$95.75	Brohl
9.11.3	Local Usage, Per Minute of Use	$0.002599		Brohl
9.11.4	Vertical Features			
	10XXX Direct Dialed Blocking	$0.08		Brohl
	Account Codes - per system	$7.27	$80.01	Brohl
	Attendant Access Line - per station line	$0.08	$1.16	Brohl
	Audible Message Waiting	$0.13	$1.01	Brohl
	Authorization Codes - per system	$3.13	$239.29	Brohl
	Auto Callback	$0.08		Brohl
	Automatic Line	$0.07	$0.34	Brohl
	Automatic Route Selection - Common Equip. per system	$2.12	$2,099.56	Brohl
	Blocking of pay per call services	$0.10		Brohl
	Bridging	$0.08		Brohl
	Call Drop	$0.07	$0.34	Brohl
	Call Exclusion - Automatic	$0.07	$1.01	Brohl
	Call Exclusion - Manual	$0.07	$0.67	Brohl
	Call Forward Don't Answer - All Calls	$0.13		Brohl
	Call Forwarding Incoming Only	$0.08		Brohl
	Call Forwarding Intra Group Only	$0.08		Brohl
	Call Forwarding Variable Remote	$0.11		Brohl
	Call Forwarding: Busy Line (Expanded)	$0.09		Brohl
	Call Forwarding: Busy Line (External)	$0.09		Brohl
	Call Forwarding: Busy Line (External) Don't Answer	$0.15		Brohl
	Call Forwarding: Busy Line (Overflow)	$0.09		Brohl
	Call Forwarding: Busy Line (Overflow) Don't Answer	$0.15		Brohl
	Call Forwarding: Busy Line (Programmable)	$0.10		Brohl
	Call Forwarding: Busy Line/Don't Answer Programmable Svc. Establishment		$15.66	Brohl
	CF DON'T ANSWER/CF BUSY CUSTOMER PROGRAMMABLE - PER LINE		$1.01	Brohl
	Call Forwarding: Busy Line/Don't Answer (Expanded)	$0.15	$37.92	Brohl
	Call Forwarding: Don't Answer	$0.13	$37.92	Brohl
	Call Forwarding: Don't Answer (Expanded)	$0.13		Brohl
	Call Forwarding: Don't Answer (Programmable)	$0.13		Brohl
	Call Forwarding: Variable	$0.10		Brohl
	Call Forwarding: Variable - no call complete option	$0.10		Brohl
	Call Hold	$0.08		Brohl
	Call Hold/3-Way/Call Transfer	$0.32		Brohl
	Call Park (Basic - Store & Retrieve)	$0.09		Brohl
	Call Pickup	$0.08		Brohl
	Call Transfer	$0.32		Brohl
	Call Waiting Dial Originating	$0.08		Brohl
	Call Waiting Indication - per timing state	$0.46	$1.01	Brohl
	Call Waiting Originating	$0.09		Brohl
	Call Waiting Terminating - All Calls	$0.11		Brohl
	Call Waiting Terminating - Incoming Only	$0.11		Brohl
	Call Waiting/ Cancel Call Waiting	$0.14		Brohl
	CENTREX COMMON EQUIPMENT		$1,206.23	Brohl
	Centrex Management System (CMS)	$0.60		Brohl
	Centrex Plus DID numbers per number	$0.11		Brohl
	Centrex Plus to Centrex Plus	$5.28		Brohl

		Recurring	Non- Recurring	Witness
Centrex Plus to IC Carrier		$5.28		Brohl
Centrex Plus to PBX/Key Blocked		$5.28		Brohl
Centrex Plus to PBX/Key Non-Blocked		$5.28		Brohl
CFBL - All Calls		$0.09		Brohl
CFBL - Incoming Only		$0.09	$37.92	Brohl
CFDA Incoming Only		$0.08	$37.92	Brohl
CLASS - Anonymous Call Rejection		$0.33		Brohl
CLASS - Call Trace		$2.39		Brohl
CLASS - Call Waiting ID		$0.10		Brohl
CLASS - Calling Name & Number		$0.41		Brohl
CLASS - Calling Number Delivery		$0.10		Brohl
CLASS - Calling Number Delivery - Blocking		$0.34		Brohl
CLASS - Continuous Redial		$0.23	$1.26	Brohl
CLASS - Last Call Return		$0.10	$1.27	Brohl
CLASS - Priority Calling		$0.19	$1.20	Brohl
CLASS - Selective Call Forwarding		$0.16	$1.26	Brohl
CLASS - Selective Call Rejection		$0.23	$1.20	Brohl
Common Equipment per 1.544 Mbps facility (DS1)		$58.01		Brohl
Conference Calling - Meet Me		$14.03	$42.47	Brohl
Conference Calling - Preset		$10.27	$42.47	Brohl
Custom Ringing First Line (Short/Long/Short)		$0.09		Brohl
Custom Ringing First Line (Short/Short)		$0.09		Brohl
Custom Ringing First Line (Short/Short/Long)		$0.09		Brohl
Custom Ringing Second Line (Short/Long/Short)		$0.09		Brohl
Custom Ringing Second Line (Short/Short)		$0.09		Brohl
Custom Ringing Second Line (Short/Short/Long)		$0.09		Brohl
Custom Ringing Third Line (Short/Long/Short)		$0.08		Brohl
Custom Ringing Third Line (Short/Short)		$0.08		Brohl
Custom Ringing Third Line (Short/Short/Long)		$0.08		Brohl
Data Call Protection (DMS 100)		$0.07		Brohl
Dir Sta Sel/Busy Lamp Fld per arrangement		$1.76	$0.34	Brohl
Directed Call Pickup with Barge-in		$0.18	$20.16	Brohl
Directed Call Pickup without Barge-in		$0.10	$20.16	Brohl
Distinctive Ring/Distinctive Call Waiting		$0.09	$40.31	Brohl
Distinctive Ringing		$0.09		Brohl
EBS - Set Interface - per station line		$1.39		Brohl
Executive Busy Override		$0.08		Brohl
Expensive Route Warning Tone- per system		$0.07	$71.91	Brohl
Facility Restriction Level - per system		$0.07	$44.24	Brohl
Feature Display		$0.08		Brohl
Group Intercom		$0.15	$0.46	Brohl
Hot Line - per line		$0.13	$1.01	Brohl
Hunting: Multiposition Circular Hunting		$0.26		Brohl
Hunting: Multiposition Hunt Queuing		$0.22	$38.59	Brohl
Hunting: Multiposition Series Hunting		$0.26		Brohl
Hunting: Multiposition with Announcement in Queue		$3.08	$38.59	Brohl
Hunting: Multiposition with Music in Queue		$1.10	$40.75	Brohl
Incoming Calls Barred		$0.08		Brohl
International Direct Dial Blocking		$0.08		Brohl
ISDN Short Hunt		$0.56	$1.70	Brohl
Line Side Answer Supervision		$0.09		Brohl
Loudspeaker Paging - per trunk group		$21.11	$176.53	Brohl
Make Busy Arrangements - per group		$0.35	$0.67	Brohl
Make Busy Arrangements - per line		$0.14	$0.67	Brohl
Message Center - per main station line		$0.07	$0.34	Brohl
Message Waiting Indication Audible/Visual		$0.13		Brohl
Message Waiting Visual		$0.13	$0.34	Brohl
Music On Hold - per system		$21.99	$23.13	Brohl
Network Speed Call		$0.08		Brohl
Night Service Arrangement		$0.08		Brohl
Outgoing Calls Barred		$0.08		Brohl
Outgoing Trunk Queuing		$0.13		Brohl
Privacy Release		$0.08	$0.47	Brohl
Query Time		$0.24	$0.34	Brohl
Speed Calling 1 Digit Controller		$0.08		Brohl
Speed Calling 1 Digit User		$0.08		Brohl
Speed Calling 1# List Individual		$0.08		Brohl
Speed Calling 2 Digit Controller		$0.08		Brohl
Speed Calling 2 Digit User		$0.08		Brohl

		Recurring	Non- Recurring	Witness
Speed Calling 2# List Individual		$0.08		Brohl
Speed Calling 30 Number		$0.08		Brohl
Speed Calling 8 Number		$0.08		Brohl
Station Camp-On Service - per main station		$8.18	$0.34	Brohl
Station Dial Conferencing (6 Way)		$1.64		Brohl
Station Message Detail Recording (SMDR)		$0.18		Brohl
Three Way Calling		$0.32		Brohl
Time and Date Display		$0.18		Brohl
Time of Day Control for ARS - per system		$0.07	$125.82	Brohl
Time of Day NCOS Update		$0.08	$0.54	Brohl
Time of Day Routing - per line		$0.13	$0.52	Brohl
Toll Restriction Service		$0.08		Brohl
Trunk Answer Any Station		$0.08		Brohl
Trunk Verification from Designated Station		$0.07	$0.39	Brohl
UCD in hunt group - per line		$7.92	$0.67	Brohl
UCD with Music After Delay		$5.24		Brohl
CMS - SYSTEM ESTABLISHMENT - INITIAL INSTALLATION			$971.60	Brohl
CMS - SYSTEM ESTABLISHMENT - SUBSEQUENT INSTALLATION			$485.80	Brohl
CMS - PACKET CONTROL CAPABILITY, PER SYSTEM			$485.80	Brohl
SMDR-P - SERVICE ESTABLISHMENT CHARGE, INITIAL INSTALLATION			$339.30	Brohl
SMDR-P - ARCHIVED DATA			$177.29	Brohl
9.11.5 Subsequent Order Charge			$13.57	Brohl
9.11.6 Digital Line Side Port (Supporting BRI ISDN)				
First Port		$10.56	$219.37	Brohl
Each Additional Port		$10.56	$219.37	Brohl
9.11.7 Digital Trunk Ports				
DS1 Local Message Trunk Port		$56.98		Brohl
Message Trunk Group, First Trunk			$209.14	Brohl
Message Trunk Group, Each Additional			$50.84	Brohl
DS1 PRI ISDN Trunk Port		$228.78	$648.55	Brohl
DS1 / DID Trunk Port		$3.38	$212.74	Brohl
9.11.8 DS0 Analog Trunk Port				
First Port		$15.78	$123.11	Brohl
Each Additional		$15.78	$28.57	Brohl
9.12 Customized Routing				
9.12.1 Development of Custom Line Class Code – Directory Assistance or Operator Services Routing Only			ICB	Brohl
9.12.2 Installation Charge, per Switch Directory Assistance or Operator Service Routing Only			ICB	Brohl
9.12.3 All Other Custom Routing		ICB	ICB	Brohl
9.13 Common Channel Signaling/SS7				
9.13.1 CCSAC STP Port		$249.69	$440.28	Brohl
9.13.2 CCSAC Options Activation Charge				
9.13.2.1 Basic Translations				
First Activation, per Order			$115.34	Brohl
Each Additional Activation, per Order			$9.58	Brohl
9.13.2.2 CCSAC Options Database Translations				
First Activation per Order			$134.49	Brohl
Each additional Activation per Order			$57.45	Brohl
9.13.3 Signal Formulation, ISUP, Per Call Set-Up Request		$0.0020272		Brohl
9.13.4 Signal Transport, ISUP, Per Call Set-Up Request		$0.0013148		Brohl
9.13.5 Signal Transport, TCAP, per Data Request		$0.0002914		Brohl
9.13.6 Signal Switching, ISUP, Per Call Set-Up Request		$0.0009192		Brohl
9.13.7 Signal Switching, TCAP, Per Data Request		$0.0005754		Brohl
9.14 Advanced Intelligent Network (AIN)				
9.14.1 AIN Customized Services (ACS)			ICB	Brohl
9.14.2 AIN Platform Access (APA)		ICB	ICB	Brohl

		Recurring	Non- Recurring	Witness
9.14.3 AIN Query Processing, per Query		ICB		Brohl
9.15 Line Information Database (LIDB)				
9.15.1 LIDB Storage			No Charge	Brohl
9.15.2 Line Validation Administration System Access (LVAS)			ICB	Brohl
9.15.2.1 LIDB Line Record Initial Load				
9.15.2.1.1 Up to 20,000 Line Records			$2,601.00	Brohl
9.15.2.1.2 Over 20,000 Line Records			ICB	Brohl
9.15.2.2 Mechanized Service Account Update, per Addition or Update Processed			ICB	Brohl
9.15.2.3 Individual Line Record Audit			ICB	Brohl
9.15.2.4 Account Group Audit			ICB	Brohl
9.15.2.5 Expedited Request Charge for Manual Updates			ICB	Brohl
9.15.3 LIDB Query Service, per Query		$0.0009435	See 9.13.2.2	Brohl
9.15.4 Fraud Alert Notification, per Alert		No Charge		Brohl
9.16 8XX Database Query Service				
9.16.1 Basic Query, per Query		$0.02007675	See 9.13.2.2	Brohl
9.16.2 POTS Translation		$0.00000165		Brohl
9.16.3 Call Handling & Destination Feature		$0.00000055		Brohl
9.17 ICNAM, Per Query		$0.000836	See 9.13.2.2	Brohl
9.18 Construction Charges		ICB	ICB	Kennedy
9.19 Miscellaneous Charges				
*** Per 1/2 hour or fraction thereof**				
* Additional Engineering – Basic			$31.84	Kennedy
* Additional Engineering – Overtime			$39.38	Kennedy
* Additional Labor Installation – Overtime			$9.05	Kennedy
* Additional Labor Installation – Premium			$18.10	Kennedy
* Additional Labor Other – Basic			$27.75	Kennedy
* Additional Labor Other – Overtime			$37.06	Kennedy
* Additional Labor Other – Premium			$46.39	Kennedy
* Testing and Maintenance – Basic			$29.48	Kennedy
* Testing and Maintenance – Overtime			$39.38	Kennedy
* Testing and Maintenance – Premium			$49.28	Kennedy
* Maintenance of Service – Basic			$27.75	Kennedy
* Maintenance of Service – Overtime			$37.06	Kennedy
* Maintenance of Service – Premium			$46.39	Kennedy
* Additional COOP Acceptance Testing – Basic			$29.48	Kennedy
* Additional COOP Acceptance Testing – Overtime			$39.38	Kennedy
* Additional COOP Acceptance Testing – Premium			$49.28	Kennedy
* NonScheduled COOP Testing - Basic			$29.48	Kennedy
* NonScheduled COOP Testing – Overtime			$39.38	Kennedy
* NonScheduled COOP Testing – Premium			$49.28	Kennedy
* NonScheduled Manual Testing – Basic			$29.48	Kennedy
* NonScheduled Manual Testing – Overtime			$39.38	Kennedy
* NonScheduled Manual Testing – Premium			$49.28	Kennedy
* Cooperative Scheduled Testing - Loss			$0.08	Kennedy
* Cooperative Scheduled Testing - C Message Noise			$0.08	Kennedy
* Cooperative Scheduled Testing - Balance			$0.33	Kennedy
* Cooperative Scheduled Testing - Gain Slope			$0.08	Kennedy
* Cooperative Scheduled Testing - C Notched Noise			$0.08	Kennedy
* Manual Scheduled Testing - Loss			$0.17	Kennedy
* Manual Scheduled Testing -C- Message Noise			$0.17	Kennedy
* Manual Scheduled Testing - Balance			$0.67	Kennedy
* Manual Scheduled Testing - Gain Slope			$0.17	Kennedy
* Manual Scheduled Testing - C Notched Noise			$0.17	Kennedy
Additional Dispatch			$84.60	Kennedy
Date Change			$10.40	Kennedy
Design Change			$74.10	Kennedy
Expedite Charge			ICB	Kennedy
Cancellation Charge			ICB	Kennedy
9.20 Channel Regeneration				
DS1 Regeneration		$1.97	$480.53	Kennedy

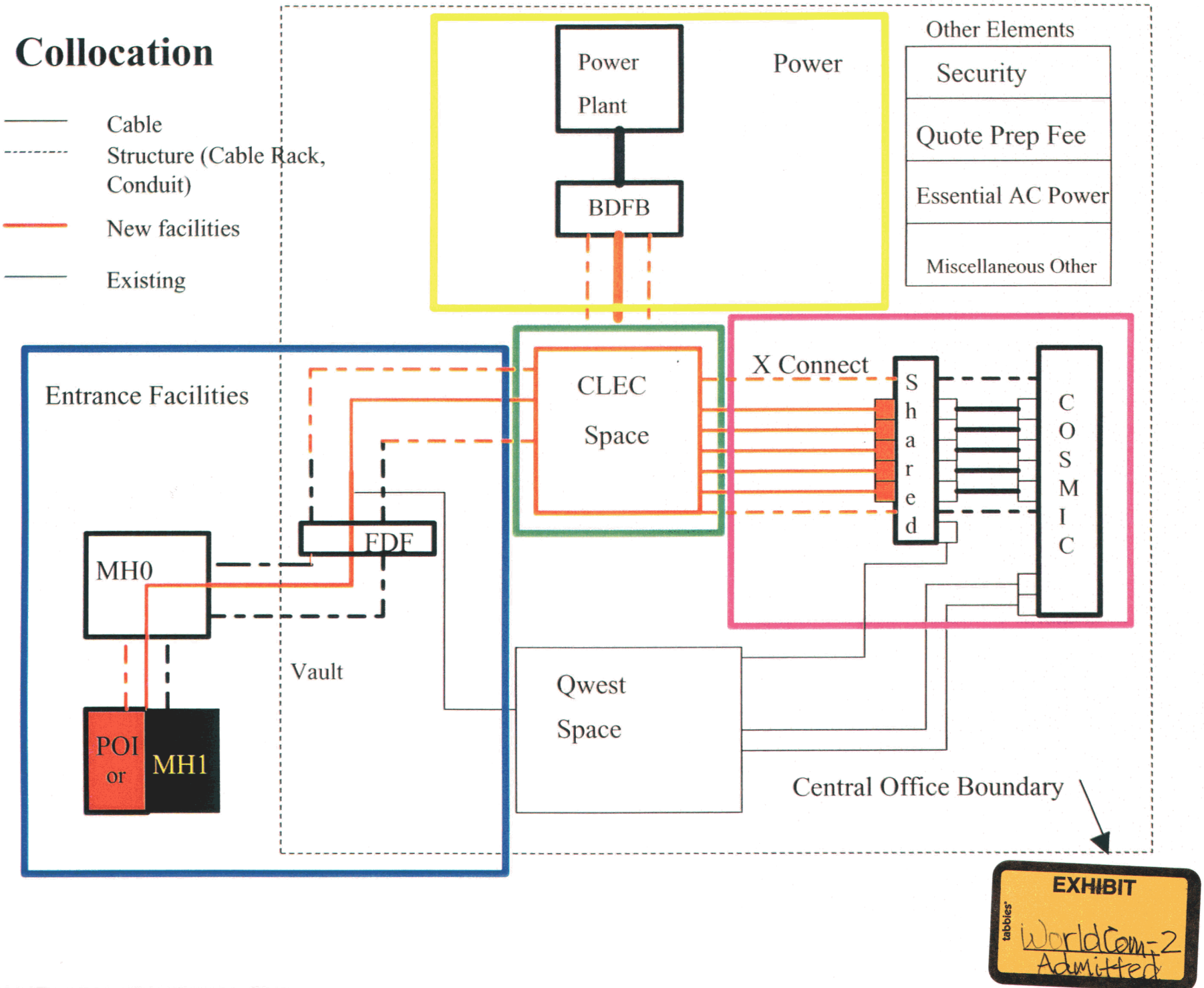
		Recurring	Non- Recurring	Witness
DS3 Regeneration		$6.09	$1,817.89	Kennedy
9.21 Reserved for future use.				
9.22 Reserved for future use.				
9.23 UNE Combinations				
9.23.1 UNE-P Conversion Non-Recurring Charges				
9.23.1.1 UNE-P POTS, CENTREX, PAL, PBX,				
First			$0.68	Brohl
Each Additional			$0.14	Brohl
9.23.1.2 UNE-P POTS, CENTREX, PAL, PBX, Manual				
First			$16.28	Brohl
Each Additional			$2.71	Brohl
9.23.1.3 UNE-P PBX DID				
First			$20.70	Brohl
Each Additional			$3.13	Brohl
9.23.1.4 UNE-P ISDN BRI				
First			$15.15	Brohl
Each Additional			$3.13	Brohl
9.23.1.5 UNE-P ISDN PRI, DSS per DS1 Facility			$51.22	Brohl
9.23.1.6 UNE-P ISDN PRI, DSS Trunk				
First			$18.85	Brohl
Each Additional			$3.13	Brohl
9.23.2 UNE-P New Connection Non-Recurring Charges				
9.23.2.1 UNE-P POTS Mechanized				
First			$55.56	Brohl
Each Additional			$15.94	Brohl
9.23.2.2 UNE-P POTS Manual				
First			$82.49	Brohl
Each Additional			$18.52	Brohl
9.23.3 UNE-Combination Private Line				
DS0/DS1/DS3/OCN/Integrated T-1 Existing Service			$41.05	Kennedy
9.23.4 Enhanced Extended Loop (EEL)				
9.23.4.1 EEL Link				
DS0			$250.19	Kennedy
Zone 1		$16.89		Kennedy
Zone 2		$22.57		Kennedy
Zone 3		$34.34		Kennedy
Each Additional			$218.81	Kennedy
DS1			$308.19	Kennedy
Zone 1		$84.48		Kennedy
Zone 2		$84.57		Kennedy
Zone 3		$91.39		Kennedy
Each Additional			$262.31	Kennedy
DS3			$332.66	Kennedy
Zone 1		$897.72		Kennedy
Zone 2		$899.73		Kennedy
Zone 3		$1,053.66		Kennedy
Each Additional			$286.78	Kennedy
	Recurring Fixed	**Recurring Per Mile**	**Nonrecurring**	
9.23.4.2 EEL Transport				
DS0			$307.95	Kennedy
DS0 Over 0 to 8 Miles	$19.27	$0.13		Kennedy
DS0 Over 8 to 25 Miles	$19.29	$0.12		Kennedy
DS0 Over 25 to 50 Miles	$19.33	$0.12		Kennedy

		Recurring	Non- Recurring	Witness
DS0 Over 50 Miles	$19.28	$0.06		Kennedy
DS1			$352.92	Kennedy
DS1 Over 0 to 8 Miles	$31.14	$1.45		Kennedy
DS1 Over 8 to 25 Miles	$31.40	$1.18		Kennedy
DS1 Over 25 to 50 Miles	$31.87	$2.14		Kennedy
DS1 Over 50 Miles	$31.83	$1.12		Kennedy
DS1 Transport Mux			$258.16	Kennedy
DS3			$352.92	Kennedy
DS3 Over 0 to 8 Miles	$197.32	$61.17		Kennedy
DS3 Over 8 to 25 Miles	$200.35	$18.78		Kennedy
DS3 Over 25 to 50 Miles	$184.41	$23.73		Kennedy
DS3 Over 50 Miles	$194.79	$16.34		Kennedy
DS3 Transport Mux			$258.16	Kennedy
		Recurring	Nonrecurring	
9.23.4.3 Multiplexing				
DS3 to DS1		$232.15	$268.62	Kennedy
DS1 to DS0		$210.68	$268.62	Kennedy
9.23.4.4 DS0 Channel Performance				
DS0 Low Side Channelization		$11.52		Kennedy
DS1/DS0 MUX, Low Side Channelization		$7.35	$239.83	Kennedy
9.23.4.5 Concentration Capability		ICB		Kennedy
9.24 Unbundled Packet Switching				
9.24.1 Unbundled Packet Switch Customer Channel				
DSLAM		$20.29	$60.14	Kennedy
Virtual Transport		$3.16	$60.14	Kennedy
Unbundled Packet Switch Customer Channel with Subloop			$127.17	Kennedy
Unbundled Packet Switch Customer Channel With Shared Subloop			60.14	Kennedy
9.24.2 Unbundled Packet Switch Interface Port				
DS1		$208.02	$227.50	Kennedy
DS3		$135.05	$227.50	Kennedy
10.0 Ancillary Services				Brotherson
10.1 Local Number Portability	See FCC Tariff #1 Section 20.3.1 & 20.3.3			
10.1.1 LNP Queries				
10.1.2 LNP Managed Cuts			$27.31	6
Standard Managed Cuts per person per 1/2 Hr.			$35.43	6
Overtime Managed Cuts per person per 1/2 Hr.			$43.49	6
Premium Managed Cuts per person per 1/2 Hr.				
10.2 911/E911	No Charge			2
10.3 White Pages Directory Listings, Facility Based Providers	No Charge			2
10.3.1 Primary Listing				
10.3.2 Premium/Privacy Listings		General Exchange Tariff Rate, less wholesale discount		
10.4 Directory Assistance, Facility Based Providers				
10.4.1 Local Directory Assistance, Per Call		$0.34		2
10.4.2 National Directory Assistance, per Call		$0.385		2
10.4.3 Call Branding, Set- Up and Recording			$10,500.00	2
10.4.4 Loading Brand /Per Switch			$175.00	2
10.4.5 Call Completion Link, per call		$0.085		
10.5 Directory Assistance List Information				
10.5.1 Initial Database Load, per Listing		$0.025		2
10.5.2 Reload of Database, per Listing		$0.02		2
10.5.3 Daily Updates, per Listing		$0.025		2
10.5.4 One-time Set-Up Fee, per Hour			$82.22	2

		Recurring	Non- Recurring	Witness
10.5.5 Media Charges for File Delivery				
10.5.5.1 Electronic Transmission		$0.001		2
10.5.5.2 Tapes (charges only apply if this is selected as		$30.00		
10.5.5.3 Shipping Charges (for tape delivery)			ICB	3
10.6 Toll and Assistance Operator Services, Facility Based Providers,				
10.6.1 **Option A** – Per Message				
Operator Handled Calling Card		$1.45		2
Machine Handled Calling Card		$0.60		2
Station Call		$1.50		2
Person Call		$3.50		2
Connect to Directory Assistance		$0.75		2
Busy Line Verify, per Call		$0.72		
Busy Line Interrupt		$0.87		
Operator Assistance, per Call		$0.87		2
10.6.2 **Option B** – Per Operator Work Second and Computer Handled Calls				
Operator Handled, per Operator Work Second		$0.181		2
Machine Handled, per Call		$0.25		2
10.6.3 Call Branding, Set-Up & Recording			$10,500.00	2
10.6.4 Loading Brand/Per Switch			$175.00	2
10.7 Access to Poles, Ducts, Conduits and Rights of Way				
10.7.1 Pole Inquiry Fee, per Mile			$322.99	Kennedy
10.7.2 Innerduct Inquiry Fee, per Mile			$388.25	Kennedy
10.7.3 ROW Inquiry Fee			$143.49	Kennedy
10.7.4 ROW Doc Prep Fee			$143.49	Kennedy
10.7.5 Field Verification Fee, per Pole			$35.87	Kennedy
10.7.6 Field Verification Fee, per Manhole			$466.34	Kennedy
10.7.7 Planner Verification, Per Manhole			$16.00	Kennedy
10.7.8 Manhole Verification Inspector Per Manhole			$286.98	Kennedy
10.7.9 Manhole Make-Ready Inspector, per Manhole			$430.47	Kennedy
10.7.10 Pole Attachment Fee, per Foot, per Year		$4.28		Kennedy
10.7.11 Innerduct Occupancy Fee, per Foot, per Year		$0.36		Kennedy
10.7.12 Access Agreement Consideration			$10.00	Kennedy
12.0 Operational Support Systems				
12.1 Daily Usage Record File, per Record		$0.000746		Brohl
12.2 Trouble Isolation Charge			Section 13, Qwest's Arizona Exchange and Network Services Catalog	
17.0 Bona Fide Request Process				
17.1 Processing Fee			$2,410.58	Kennedy

NOTES:
[1] Reserved for future use
[2] Market-based rates not proposed in Arizona Cost Docket (Consolidated Arbitration).
[3] ICB, Individual Case Basis pricing.
[4] Reserved for future use
[5] Reserved for future use
[6] Regional TELRIC based where required.

1204682.1/67817.240


Collocation
Cable
Structure (Cable Rack, Conduit)
New facilities
Existing
Power Plant
Power
BDFB
Other Elements
Security
Quote Prep Fee
Essential AC Power
Miscellaneous Other
Entrance Facilities
CLEC Space
X Connect
Shared
COSMIC
MH0
FDF
Vault
POI or MH1
Qwest Space
Central Office Boundary
EXHIBIT
WorldCom-2
Admitted

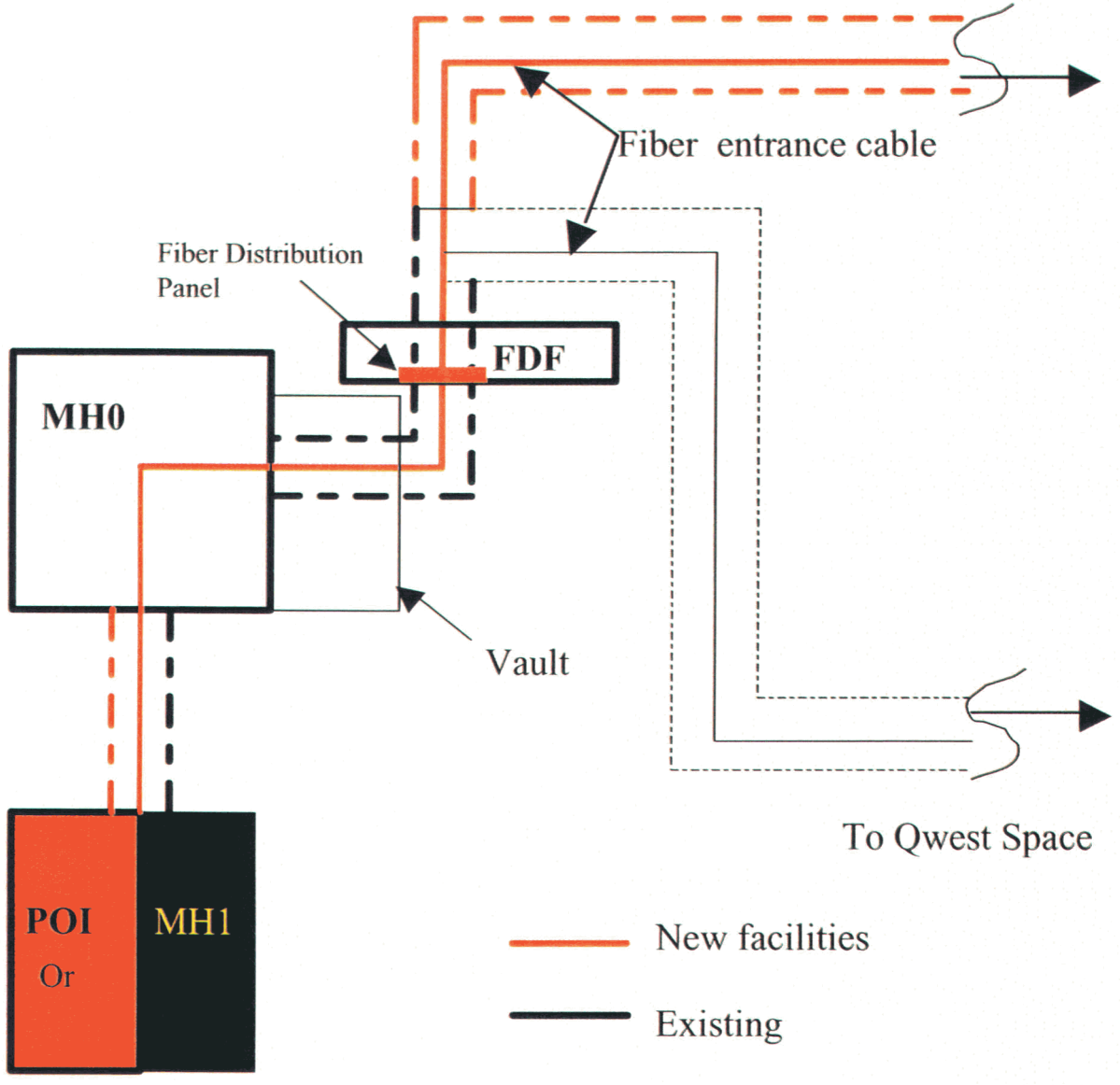
ENTRANCE FACILITIES

Non Recurring

Utility Hole (New)
Fiber splicing and testing
Single fiber jumper
Cable Racking (New)
Cable Placement
Cable (Fiber)
Fiber Placement
Conduit / Innerduct / Riser (New)
Fiber Distribution Panel

Recurring

Utility Hole (Existing)
Conduit / Innerduct / Riser (Existing)
Fiber Distribution Frame
Cable Rack (Existing)
Maintenance



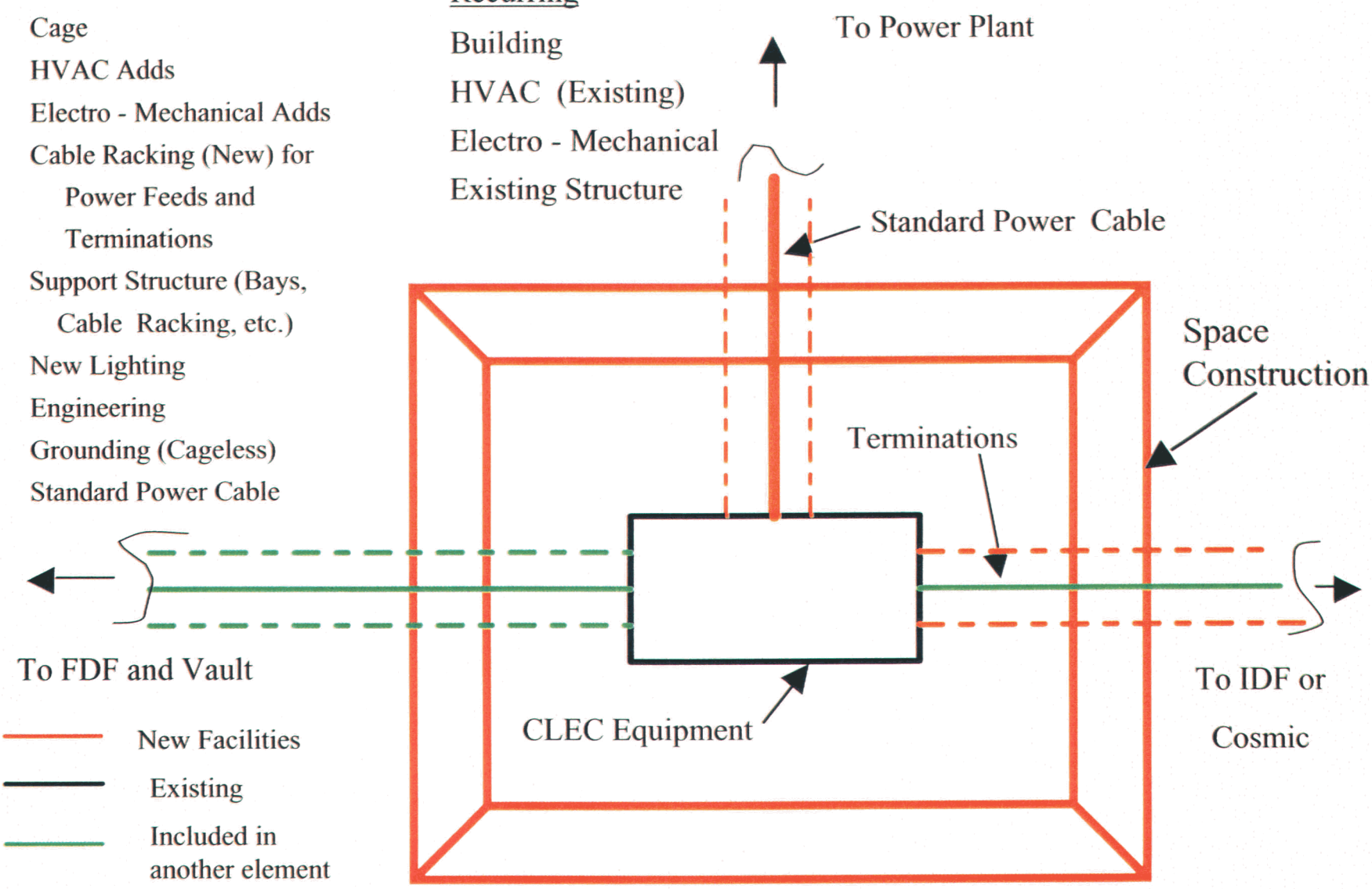
Space Construction

Non Recurring

Cage
HVAC Adds
Electro - Mechanical Adds
Cable Racking (New) for
Power Feeds and
Terminations
Support Structure (Bays,
Cable Racking, etc.)
New Lighting
Engineering
Grounding (Cageless)
Standard Power Cable

Recurring

Building
HVAC (Existing)
Electro - Mechanical
Existing Structure



POWER

Non Recurring

Power Cable

Ground Wire

Recurring

Rectifiers

Generator

Batteries

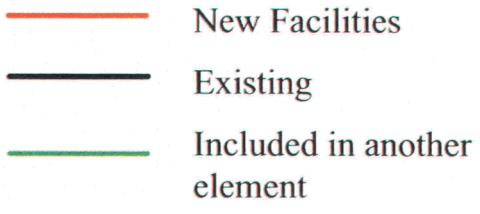
Power Board

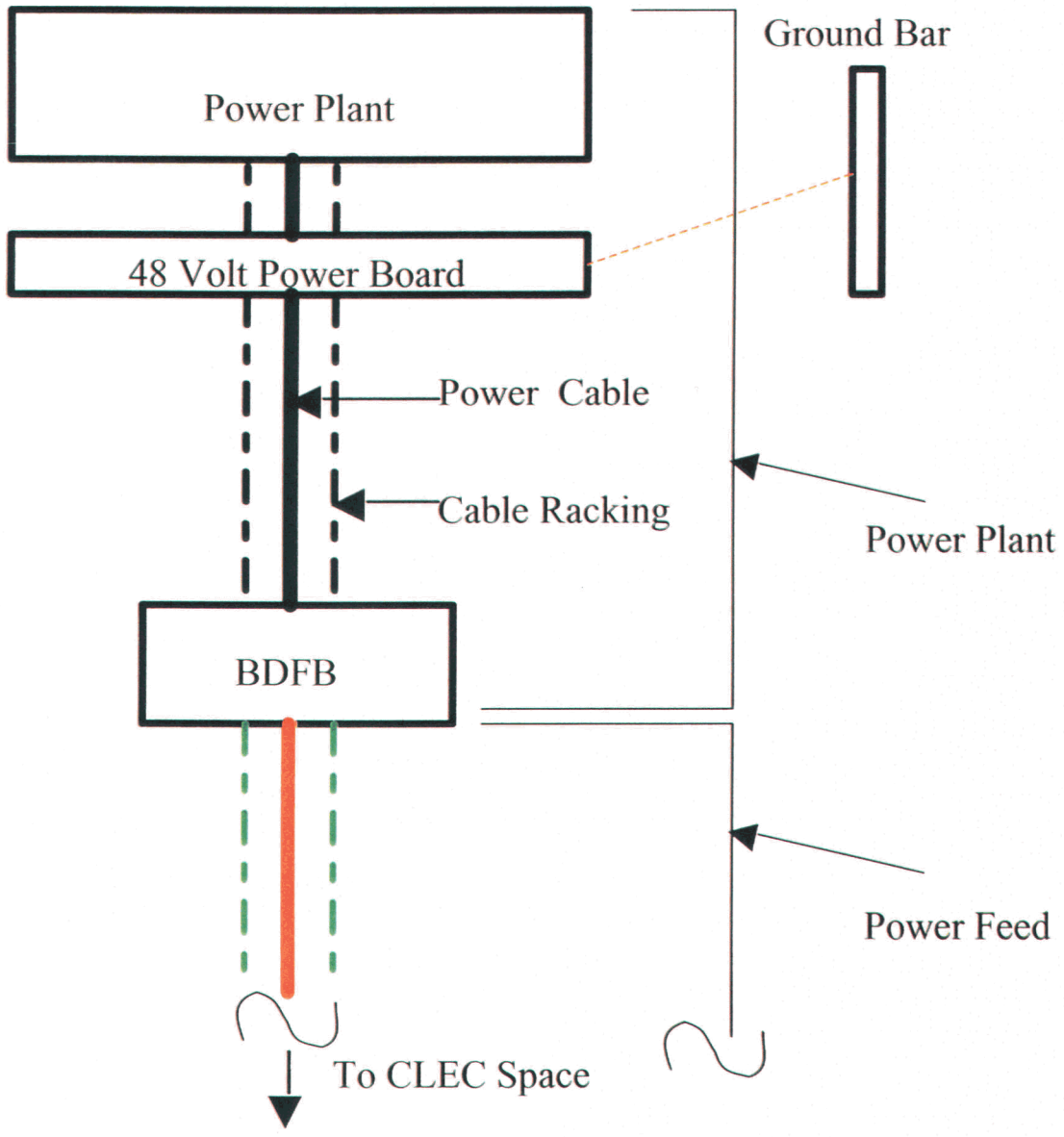
Grounding

BDFB

Structure (Racking, etc.)

Power Cables (BDFB to Generator)





Cross Connect

Non Recurring - Terminations

Cable

Blocks (CLEC side of the intermediate frame)

Panels

Recurring - Interconnection Tie Pair (ITP)

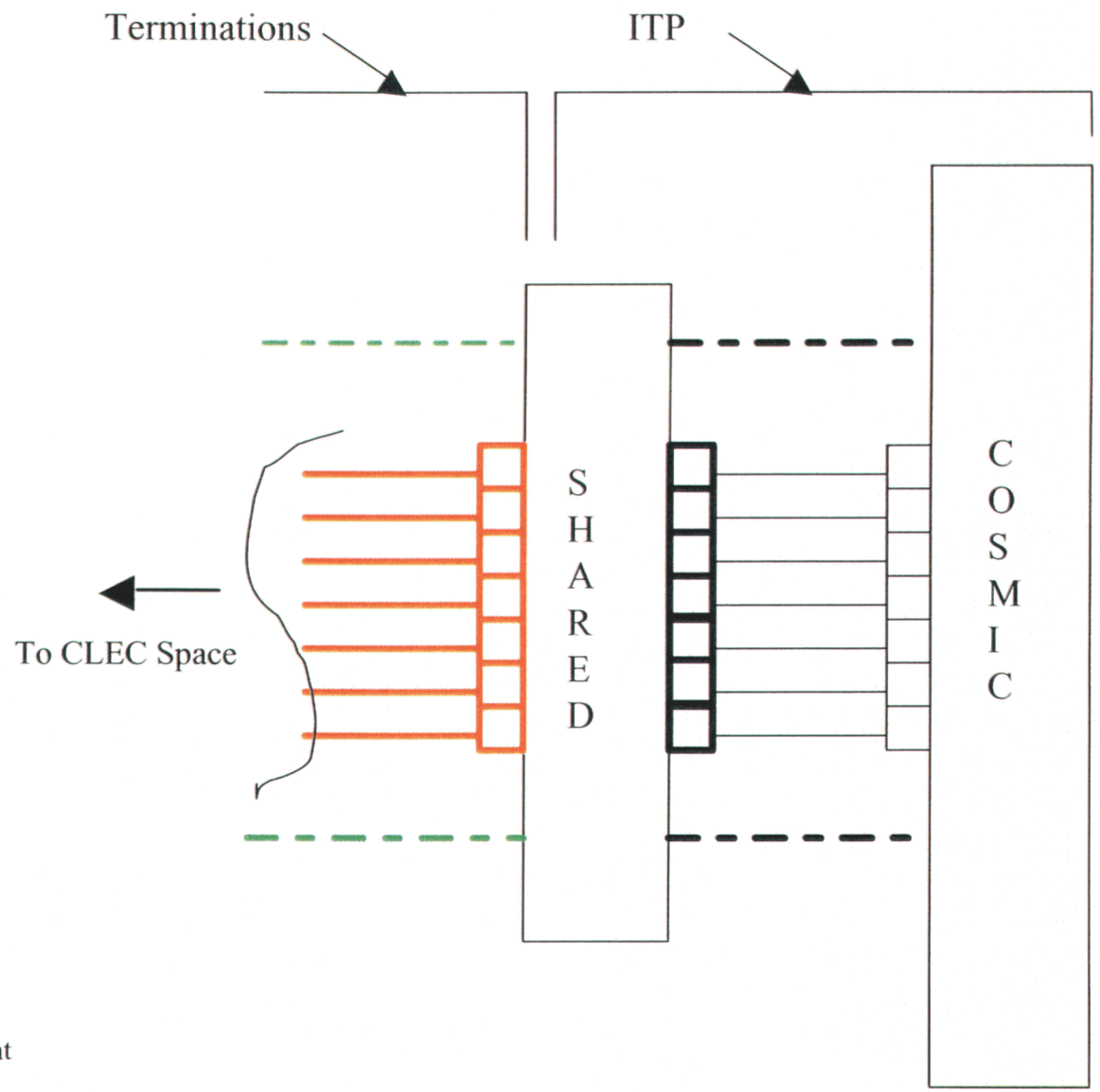
Intermediate Frame

Blocks (Existing)

DSX Panels

Cables

Structure (Racking, etc.)



Included in another element

New Facilities

Existing

Qwest

Collocation Project Management Center
700 W. Mineral Ave.
Littleton, CO 80120
(303) 707-7241
(303) 707-9185

June 18, 2001

Jennifer Tursso
Time Warner Telcom
10475 Park Meadow Dr.
Littleton, CO 80124

Dear Jennifer,

Attached to this letter is a detailed price quote for Decommission of Physical Collocation service for the Tucson Rincon wire center. All Security cards must be returned, unless you additional collocation sites within the wire center. Failure to return Security cards will delay the order.

These price quotes are dated for June 18, 2001 and will expire on July 18, 2001. This limitation is required because of fluctuating prices, cost of materials, labor and space limitations.

Failure to remit your initial 100% within the 30 day acceptance period will result in cancellation and billing of Qwest expenditures incurred to date in building your collocation sites.

If you have any questions regarding this quote, please contact your Wholesale project manager.

Sincerely,

Joe Borrini
Project Manager-Quotes, CPMC

cc: Pat White

DATE: JUNE 18, 2001
CLEC: TIME WARNER
C. O.: TUCSON RINCON
CLLI: TCSNAZRN
BAN: C11LD02
QUOTE EXPIRATION DATE: JULY 18, 2001

Entrance Facility PLTS	-	**Account Team Rep.**
Entrance Facility Fiber	-	Pat White
Enclosure	-	515-241-0000
Cage	-	
Base Rate Area	-	
Amps	-	
Feeds	-	

(DECOMMISSION) COLLOCATION PRICE SUMMARY

NONRECURRING CHARGES

USOC	Rate Elements	Qty	Length/Size	Description	Unit Price	Total Price	Price Resource
	Decommission Assessment Fee			Per Request	$ 854.60	$ 854.60	
	Network Systems Administrative Fee			Per Request	$ 2,601.05	$ 2,601.05	
	Total Nonrecurring Charges					$3,455.65	
	Total Amount Due			**$3,455.65**			

QWEST PRICE QUOTE

DATE: JUNE 18, 2001
CLEC: TIME WARNER
C. O.: TUCSON RINCON
CLLI: TCSNAZRN
BAN: C11LD02
QUOTE EXPIRATION DATE: JULY 18, 2001
EFFECTIVE BILLING DATE: TBD
(DECOMMISSION) COLLOCATION PRICE SUMMARY

Entrance Facility PLTS	-
Entrance Facility Fiber	-
Enclosure	-
Cage	-
Base Rate Area	-
Amps	-
Feeds	-

Account Team Rep
Pat White
515-241-0000

MONTHLY RECURRING CHARGES

USOC	Rate Elements	Qty	Length/Size	Description.	Unit Price	Total Price	Price Resource

NONE
PLEASE NOTE THIS IS A COMPLETE DECOMMISSION RELATED TO BAN# C91LPAA ANN C81LP03.

Receipt of Payment for the 100% indicates acceptance and agreement, in accordance with the terms of your interconnection agreement, to obtain the collocation site and the associated elements requested at the stated quantities and rates.

The provided Quote is based upon the information supplied in your submission of the Qwest Collocation Application and CO-Provider Information Form.

Arizona
Docket No. T-00000A-00-0194
AT&T 002-104

INTERVENOR: AT&T Communications of the Mountain States, Inc.

REQUEST NO: 104

RE: Loop Pricing
Witness: Buckley

Please describe, in detail, all assumptions underlying Qwest's cost of engineering in its collocation model. Include, by element (cable racking, cable runs, etc), a breakout of the engineering costs, either in dollar amounts or hours required. Also, provide the assumed hourly rate for engineering.

RESPONSE:

The cost of engineering was based on an average of actual collocation job invoices and is not detailed to specific collocation elements. Please see Confidential Attachment A, actual redacted invoices. Refer to the cageless collocation jobs for engineering costs per job. Confidential Attachment A is provided pursuant to the Confidentiality agreement in this proceeding.

Due to the amount of data being provided, we will forward Confidential Attachment A to you on a cd rom as soon as it is available.

Respondent: Jennifer Peppers

CORRECTION 04/26/01:

Confidential Attachment A is a voluminous document available in paper only. Confidential Attachment A is provided pursuant to the Confidentiality agreement in this proceeding. Qwest will provide Confidential Attachment A as soon as the copies are completed.

Respondent: Jennifer Peppers

JOB COSTS BY COST CATEGORY AND FRC

[redacted]

JOB #	COST CATEGORY	TOTAL 377C	TOTAL 357C	
C9MLC20	USWC ENGINEERING	616.81	2,752.83	3369.64
	USWC LABOR	0	8.29	
	MATERIAL			
	VENDOR ENGINEERING			
	VENDOR LABOR			
	MOTOR VEHICLE	0	0	
	TRANSPORTATION	.49	374.53	375.02
	TOTAL FRC			
	TOTAL JOB COST		[redacted]	

[redacted]

INVOICE

[redacted]

Customer - 24022
Brn/Plt - 1765
Related PO -
Order Nbr - 71702 S8
[redacted]nvoice - 94310 RI

[redacted]

Sold To: US WEST BUSINESS RESOURCES INC
6912 S QUENTIN ST
ENGLEWOOD CO 80112

Tax ID:
Tax Cert:

Request Date	Customer P.O.	F.O.B	Ship Inst :
03/09/99	BVMV49637L	Prepaid & Bill-[redacted]Dock	

Ln/Rq Dt	Description	Item Number	UM Ship/Back/Cance		Price	Extended Price	Tax
1.000	Text Line	SIIM#550609 SIIM#550609					0
2.000 03/09/99	Engineering Labor	S-0101-4140/5801 S-0101-4140/5801	EA $	1	5.160.0000 Per EA	5.160.00	0
30 [illegible]/99	Engineering Labor	S-0101-4140/5801 S-0101-4140/5801	EA $	1	1.280.0000 Per EA	1.280.00	0

Site Survey

Total: 6.440.00

NJ Non-Taxable . . . . . Tax Group Summary ($) . . . 6.440.00

[redacted]

7/24

DATE REC'D: JUL 1 1999
AUTH: C 9MLC20 GEO: M 75028
[illegible]: CLLI:
[illegible]: DATE:
[illegible]: DATE:
AUTHORIZED INITIAL: DATE:
OVERRIDE. MGR: DATE:

Net 30 Days	Net Due Date 07/25/99	Tax Rt	Sales Tax	Total Order
				6.440.00

[redacted]

Tumwater

US WEST COMMUNICATIONS BR: 756-129-336-06

RCO: TUDCE0000 ACCT AREA: MN

ACCT LOC: M75028 AUTH: C9MLC20 ORG:

REQUISITION: BVMV50566B
ORDER DATE: 3/31/99

TERMS: 0.00% 0 DAYS <*> 377C

[redacted]

PICS/DCPR RUN: MECHANIZED INVOICE LOAD

INVOICES LOADED COMBINED REPORT

RUN DATE: 04/26/9
ENG AREA: MN
PAGE: 9

INVOICE NO.: 69384117
INVOICE DATE: 04/26/99

TRADE DISCOUNT: 0.00%

[redacted]

CONTACT: [redacted]

VENDOR ORDER	VENDOR SPEC	MAIN ITEM	POINT ITEM	MFR	BASIC UNIT/ HECI	PART NUMBER	BILL CATGY	UNIT OF MEASURE* PRICE MULT	CONTR/ NON-CONTR	QUANTITY	UNIT PRICE	ITEM CHARGES
E9845ME	000	997	80	[redacted]	ENGR	MELD	ENG	EA * TE	C	0	1,121.00	0.00

******* PAY THIS AMOUNT ================> 1,121.00

(COMPUTED INVOICE TOTAL: 0.00)

ANHLMNR0002

seg 1 (3.0) E 1121.00

seg (2) (4.0) M 16895

377C - 29,563.00

<*> INFORMATION RETRIEVED FROM VENDOR TABLE

JOB COSTS BY COST CATEGORY AND FRC

[redacted]

JOB #	COST CATEGORY	TOTAL 377C	TOTAL 357C	
				62 M
C9MLC17	USWC ENGINEERING	484.22	2,636.62	3120.84
	USWC LABOR	273.85	5871.46	6145.31
	MATERIAL			
	VENDOR ENGINEERING			
	VENDOR LABOR			
	MOTOR VEHICLE TRANSPORTATION	18.90	262.65	281.55
	TOTAL FRC		590.58	
	TOTAL JOB COST		[redacted]	

[redacted]

INVOICE

[redacted]

Customer - 24029
Brn/Plt - 1765
Related PO -
Order Nbr - 71632 S8
Invoice - 98277 RI

Sold To: US WEST BUSINESS RESOURCES INC
6912 S QUENTIN ST
ENGLEWOOD CO 80112

Ship To: US WEST COMMUNICATIONS
7825 FULLER RD
EDEN PRAIRIE MN 55344

Tax ID:
Tax Cert:

Request Date	Customer P.O.	F.O.B.	Ship Inst:
03/15/99	BVMV49629K	Prepaid & Bill [redacted] Dock	

Ln/Rq Dt	Description	Item Number	UM	Ship/Back/Cance	Price	Extended Price	Tax
1.000	Text Line	S50568 S50568					0
2.000 03/15/99	Engineering Labor	S-0101-4140/5801 S-0101-4140/5801	EA	S 1	6,780.0000 Per EA	6,780.00	0
0 /99	Engineering Labor	S-0101-4140/5801 S-0101-4140/5801	EA	S 1	960.0000 Per EA	960.00	0

SITE SURVEY

Total: 7,740.00

Tax Group Summary
N) Non-Taxable (%) 7,740.00

CPAAC

PO-7-22-99-7740.01

JUL 29 1999

AUTH: C9MLG7 GEO: M190666
FRC: CLLI:
DS INPUT: DATE:
IS INPUT: DATE:
AUTHORIZED INITIAL: DATE:
OVERRIDE: MGR: DATE:

		Sales Tax	Total Order
Net 30 Days	Net Due Date 08/22/99	Tax Rt	7,740.00

IF YOU HAVE QUESTIONS, PLEASE CALL: (706) 375-1636

** TOTAL PAGE.07 **

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE - Caged								
ADD								
-PRODUCT MANAGEMENT IMPLEMENTATION (PMI)								
REVIEW EIC REQUEST, ENTER INTO AQCB SYSTEM, MONITOR REQUEST PROGRESS								
1.75 HOURS PER REQUEST								
Review EIC request, enter AQCB, monitor	105	1.000				105.00	$56.97	$99.70
Subtotal - PRODUCT MANAGEMENT IMPLEMENTATION (PMI)						**105.00**		**$99.70**
-INFRASTRUCTURE AVAILABILITY CENTER (IAC)								
REVIEW INFORMATION FROM OSP, CSPEC, BRI, AND SEND TO PMI,								

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE - Caged (con't)								
PUT TOGETHER INVESTMENT PACKAGE								
Review for completeness resolve discrepancies	60	1.000				60.00	$56.97	$56.97
Determine engineering contacts	30	1.000				30.00	$56.97	$28.49
Make copies and distribute	60	1.000				60.00	$56.97	$56.97
Log to master tracking spreadsheet w/appropriate dates	30	1.000				30.00	$56.97	$28.49
Host meeting w/USW reps and co-provider	60	1.000				60.00	$56.97	$56.97
Serve as point of contact between engr and customer	120	1.000				120.00	$56.97	$113.94
Track, escalate, ensure feasibility time frames are met	60	1.000				60.00	$56.97	$56.97
Prepare feasibility letter, send to AE, prod mgmt and file	60	1.000				60.00	$56.97	$56.97
Subtotal - INFRASTRUCTURE AVAILABILITY CENTER (IAC)						**480.00**		**$455.76**
-OUTSIDE PLANT ENGINEERING - PLANNING (OSP)								
CHECK CONDUIT AND INNERDUCT AVAILABILITY								
ALSO, CHECK LOCATION OF POI MANHOLE								
Check OSP (Outside Plant) records, identify const req., req field engr	120	1.000				120.00	$51.76	$103.52
Check spare conduit/innerduct, space for fiber splice	60	1.000				60.00	$51.76	$51.76
Check for standard architecture, models, configs	60	1.000				60.00	$51.76	$51.76
Complete preliminary cost and quote preparation	180	1.000				180.00	$51.76	$155.28
Subtotal - OUTSIDE PLANT ENGINEERING - PLANNING (OSP)						**420.00**		**$362.32**

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE - Caged (con't)								
-OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)								
Make field visit, verify/identify issues with POI location	180	1.000				180.00	$51.76	$155.28
Subtotal - OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)						**180.00**		**$155.28**
-COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)								
DETERMINE RISER AND DUCT REQUIREMENTS AND DETERMINE POWER CABLING REQUIREMENTS								
Receive order; evaluate, distribute, work w/EPOC and OSP (Outside Plant)	150	1.000				150.00	$46.18	$115.45
Create CPD	120	1.000				120.00	$46.18	$92.36
Evaluate office drawings, call field, determine space	180	1.000				180.00	$46.18	$138.54
CSPEC power planner evaluation and fix drawings	180	1.000				180.00	$46.18	$138.54
Quote racking of fiber, update CPD with OSP (Outside Plant) additions	180	1.000				180.00	$46.18	$138.54
Evaluate location, complete COEFM, work w/real estate	480	1.000				480.00	$46.18	$369.44
Create CPD spreadsheet and marketing worksheet	960	1.000				960.00	$46.18	$738.88
Subtotal - COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)						**2,250.00**		**$1,731.75**
-REAL ESTATE								
PROJECT ENGINEER REVIEW COLLOCATION REQUIREMENTS								

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE - Caged (con't)								
AND PREPARE QUOTE.								
Determine scope of work, prepare quote for CSPEC/CPD	360	1.000				360.00	$46.18	$277.08
Subtotal - REAL ESTATE						**360.00**		**$277.08**
-TRANSMISSION ENGINEERING/VENDORS								
REVIEW REQUEST AND DESIGN WORK, PREPARE COSTS FOR IAC								
SOME OF THE DESIGN WORK IS BEING COMPLETED BY VENDORS								
Review inquiry and design work	480	1.000				480.00	$46.18	$369.44
Subtotal - TRANSMISSION ENGINEERING/VENDORS						**480.00**		**$369.44**
Total For Service:						**4,275.00**		**$3,451.33**

Direct Cost	**$3,451.33**

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE CAGELESS (Excludes Real Estate)								
ADD								
-PRODUCT MANAGEMENT IMPLEMENTATION (PMI)								
REVIEW EIC REQUEST, ENTER INTO AQCB SYSTEM, MONITOR REQUEST PROGRESS								
1.75 HOURS PER REQUEST								
Review EIC request, enter AQCB, monitor	105	1.000				105.00	$56.97	$99.70
Subtotal - PRODUCT MANAGEMENT IMPLEMENTATION (PMI)						**105.00**		**$99.70**
-INFRASTRUCTURE AVAILABILITY CENTER (IAC)								
REVIEW INFORMATION FROM OSP, CSPEC, BRI, AND SEND TO PMI,								
PUT TOGETHER INVESTMENT PACKAGE								
Review for completeness resolve discrepancies	60	1.000				60.00	$56.97	$56.97
Determine engineering contacts	30	1.000				30.00	$56.97	$28.49
Make copies and distribute	60	1.000				60.00	$56.97	$56.97
Log to master tracking spreadsheet w/appropriate dates	30	1.000				30.00	$56.97	$28.49
Host meeting w/USW reps and co-provider	60	1.000				60.00	$56.97	$56.97
Serve as point of contact between engr and customer	120	1.000				120.00	$56.97	$113.94
Track, escalate, ensure feasibility time frames are met	60	1.000				60.00	$56.97	$56.97

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G	H	I
						B * (C Thru F)		H * (G/60)
QUOTATION PREPARATION FEE CAGELESS (Excludes Real Estate) (con't)								
Prepare feasibility letter, send to AE, prod mgmt and file	60	1.000				60.00	$56.97	$56.97
Subtotal - INFRASTRUCTURE AVAILABILITY CENTER (IAC)						**480.00**		**$455.76**
-OUTSIDE PLANT ENGINEERING - PLANNING (OSP)								
CHECK CONDUIT AND INNERDUCT AVAILABILITY								
ALSO, CHECK LOCATION OF POI MANHOLE								
Check OSP (Outside Plant) records, identify const req., req field engr	120	1.000				120.00	$51.76	$103.52
Check spare conduit/innerduct, space for fiber splice	60	1.000				60.00	$51.76	$51.76
Check for standard architecture, models, configs	60	1.000				60.00	$51.76	$51.76
Complete preliminary cost and quote preparation	180	1.000				180.00	$51.76	$155.28
Subtotal - OUTSIDE PLANT ENGINEERING - PLANNING (OSP)						**420.00**		**$362.32**
-OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)								
Make field visit, verify/identify issues with POI location	180	1.000				180.00	$51.76	$155.28
Subtotal - OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)						**180.00**		**$155.28**
-COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)								
DETERMINE RISER AND DUCT REQUIREMENTS AND DETERMINE								

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G	H	I
						B * (C Thru F)		H * (G/60)
QUOTATION PREPARATION FEE CAGELESS (Excludes Real Estate) (con't)								
POWER CABLING REQUIREMENTS								
Receive order; evaluate, distribute, work w/EPOC and OSP (Outside Plant)	150	1.000				150.00	$46.18	$115.45
Create CPD	120	1.000				120.00	$46.18	$92.36
Evaluate office drawings, call field, determine space	180	1.000				180.00	$46.18	$138.54
CSPEC power planner evaluation and fix drawings	180	1.000				180.00	$46.18	$138.54
Quote racking of fiber, update CPD with OSP (Outside Plant) additions	180	1.000				180.00	$46.18	$138.54
Evaluate location, complete COEFM, work w/real estate	480	1.000				480.00	$46.18	$369.44
Create CPD spreadsheet and marketing worksheet	960	1.000				960.00	$46.18	$738.88
Subtotal - COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)						**2,250.00**		**$1,731.75**
-TRANSMISSION ENGINEERING/VENDORS								
REVIEW REQUEST AND DESIGN WORK, PREPARE COSTS FOR IAC								
SOME OF THE DESIGN WORK IS BEING COMPLETED BY VENDORS								
Review inquiry and design work	480	1.000				480.00	$46.18	$369.44
Subtotal - TRANSMISSION ENGINEERING/VENDORS						**480.00**		**$369.44**
Total For Service:						**3,915.00**		**$3,174.25**

Direct Cost

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G	H	I
						B * (C Thru F)		H * (G/60)

QUOTATION PREPARATION FEE CAGELESS (Excludes Real Estate) (con't)

3174.248

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G	H	I
						B * (C Thru F)		H * (G/60)
QUOTATION PREPARATION FEE Virtual (Excludes Real Estate)								
ADD								
-PRODUCT MANAGEMENT IMPLEMENTATION (PMI)								
REVIEW EIC REQUEST, ENTER INTO AQCB SYSTEM, MONITOR REQUEST PROGRESS								
1.75 HOURS PER REQUEST								
Review EIC request, enter AQCB, monitor	105	1.000				105.00	$56.97	$99.70
Subtotal - PRODUCT MANAGEMENT IMPLEMENTATION (PMI)						**105.00**		**$99.70**
-INFRASTRUCTURE AVAILABILITY CENTER (IAC)								
REVIEW INFORMATION FROM OSP, CSPEC, BRI, AND SEND TO PMI,								
PUT TOGETHER INVESTMENT PACKAGE								
Review for completeness resolve discrepancies	60	1.000				60.00	$56.97	$56.97
Determine engineering contacts	30	1.000				30.00	$56.97	$28.49
Make copies and distribute	60	1.000				60.00	$56.97	$56.97
Log to master tracking spreadsheet w/appropriate dates	30	1.000				30.00	$56.97	$28.49
Host meeting w/USW reps and co-provider	60	1.000				60.00	$56.97	$56.97
Serve as point of contact between engr and customer	120	1.000				120.00	$56.97	$113.94
Track, escalate, ensure feasibility time frames are met	60	1.000				60.00	$56.97	$56.97

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
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State: Arizona

Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE Virtual (Excludes Real Estate) (con't)								
Prepare feasibility letter, send to AE, prod mgmt and file	60	1.000				60.00	$56.97	$56.97
Subtotal - INFRASTRUCTURE AVAILABILITY CENTER (IAC)						**480.00**		**$455.76**
-OUTSIDE PLANT ENGINEERING - PLANNING (OSP)								
CHECK CONDUIT AND INNERDUCT AVAILABILITY								
ALSO, CHECK LOCATION OF POI MANHOLE								
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Subtotal - OUTSIDE PLANT ENGINEERING - PLANNING (OSP)						**420.00**		**$362.32**
-OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)								
Make field visit, verify/identify issues with POI location	180	1.000				180.00	$51.76	$155.28
Subtotal - OUTSIDE PLANT ENGINEERING - FIELD ENGR. (OSP)						**180.00**		**$155.28**
-COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)								
DETERMINE RISER AND DUCT REQUIREMENTS AND DETERMINE								

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

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A	B	C	D	E	F	G B * (C Thru F)	H	I H * (G/60)
QUOTATION PREPARATION FEE Virtual (Excludes Real Estate) (con't)								
POWER CABLING REQUIREMENTS								
Receive order; evaluate, distribute, work w/EPOC and OSP (Outside Plant)	150	1.000				150.00	$46.18	$115.45
Create CPD	120	1.000				120.00	$46.18	$92.36
Evaluate office drawings, call field, determine space	180	1.000				180.00	$46.18	$138.54
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Quote racking of fiber, update CPD with OSP (Outside Plant) additions	180	1.000				180.00	$46.18	$138.54
Evaluate location, complete COEFM, work w/real estate	480	1.000				480.00	$46.18	$369.44
Create CPD spreadsheet and marketing worksheet	960	1.000				960.00	$46.18	$738.88
Subtotal - COMMON SYSTEMS PLANNING ENGINEERING CENTER (CSPEC)						**2,250.00**		**$1,731.75**
-TRANSMISSION ENGINEERING/VENDORS								
REVIEW REQUEST AND DESIGN WORK, PREPARE COSTS FOR IAC								
SOME OF THE DESIGN WORK IS BEING COMPLETED BY VENDORS								
Review inquiry and design work	480	1.000				480.00	$46.18	$369.44
Subtotal - TRANSMISSION ENGINEERINGIVENDORS						**480.00**		**$369.44**
Total For Service:						**3,915.00**		**$3,174.25**

Direct Cost

NONRECURRING COST DETAIL SUMMARY

Study Name: ARIZONA COLLOCATION
Study Year: 2001
Analyst: Deffley
Product Group: Interconnection

ENRC Version: 2.10
Date: 02/13/01

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Work Item	Time Minutes	Prob #1	Prob #2	Prob #3	Prob #4	Applied Time (Minutes)	Labor /Hour	Cost
A	B	C	D	E	F	G	H	I
						B * (C Thru F)		H * (G/60)
QUOTATION PREPARATION FEE Virtual (Excludes Real Estate) (con't)								
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Confide
Qwest Real Est

U S WEST Real Estate Services

Project: U S West Physical Collocation Cage
Contractor's Pricing Survey Summary
Cage with 2 Post Column Design - (5 Ports for 10x10)

Prepared By: RLU GLHN

Date: 1/29/99 2/11/99

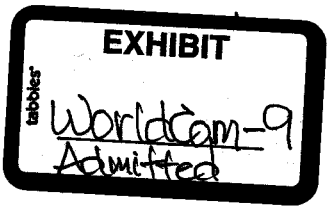
Contractor/Preparer/Location	100sf Enclosure	[illegible]	300sf Enclosure	400sf Enclosure			Comments
Contractor A - Seattle, WA	$3,287.00	$ [illegible]00	$4,631.00	$5,147.00			
Contractor B - Sherwood, OR	$2,362.00	$ [illegible]00	$3,447.00	$3,667.00			
Contractor C - St. Paul, MN	$4,440.00	$ [illegible]00	$6,081.00	$6,999.00			
Contractor D - Omaha, NE	$2,875.00	$ [illegible]00	$3,765.00	$4,025.00			
Contractor E - Seattle, WA	$3,453.00	$ [illegible]00	$4,269.00	$4,936.00			
Contractor F - Loretto, MN	$4,090.00	$ [illegible]00	$5,620.00	$6,755.00			
Contractor G - Denver, CO	$4,377.00	$ [illegible]10	$6,492.00	$7,265.00			
Contractor H - Denver CO	$3,185.00	$ [illegible]00	$5,670.00	$6,370.00			
Contractor I - Salt Lake City, UT	$1,629.84	$ [illegible]4.48	$2,938.15	$3,357.60			
Contractor J - Boise, ID	$3,716.00	$ [illegible]2.00	$5,605.00	$6,285.00			
Contractor K - Phoenix, AZ	$2,318.45	$ [illegible]9.80	$3,906.55	$3,960.02			
Contractor L - Edina, MN	$3,054.00	$ [illegible].00	$5,223.00	$5,940.00			
Contractor M - Tucson, AZ	$1,841.00	$ [illegible].00	$3,105.00	$3,388.00			
Sum of Contractor Prices by Enclosure size	$ 40,628.09	$ [illegible]18.26	$ 60,902.70	$ 68,107.91			
Number of Contractors Submitting Price Schedules	13	[illegible]	13	13			
Average Price of Enclosures by Cage Size	$ 3,125.24	$ [illegible]8.33	$ 4,684.82	$ 5,238.07			
Average Price of Enclosures per Square Foot	$ 31.25	$ 20.39	$ 15.62	$ 13.10			
Average Price of Enclosures by Cage Size (rounded to $10)	$ 3,130	$ 4,080	$ 4,680	$ 5,240			
Difference in Price from Next Smaller Size Enclosure	-	$ 950	$ 600	$ 560			

SPECIAL NOTE 1/17/00

This cost information represents contractor costs in 1999 and does not include:

1. Cost escalation from 1999 to 2000 of 2.63%, Means Cost Data Base.
2. Cage gate redesign add $750.00 to 2000 cost.
3. Real Estate loading of 5% on total 2000 cost.

These costs include only the chain link fence and do not include Electrical, Mechanical, or any other building construction cost.



BEFORE THE

ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE INVESTIGATION INTO QWEST CORPORATION'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	)	DOCKET NO. T-00000A-00-0194 Phase II

Direct Testimony of

ROY LATHROP

On Behalf of

Joint Case of

WORLDCOM, INC.,

AT&T Communications of the Mountain States, Inc.

and

XO Arizona, Inc.

May 16, 2001

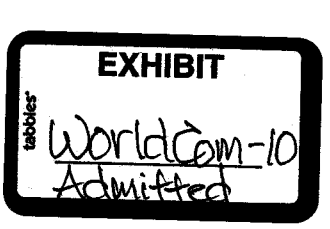
BDFB, however, is included in the power plant equipment cost that is converted into a monthly recurring charge levied on each amp ordered. Thus, collocators requesting feeds in excess of 60 amps are charged for a BDFB (in the per amp rate) they are assumed not to use. I recommend the cost of the BDFB be removed from the per amp cost developed for power feeds in excess of 60 amps.

Power Cabling Costs. Qwest's material costs for power and grounding cable are overstated. The following two tables provide material cost comparisons for power and grounding cable, respectively, from RS Means and Cobra Wire & Cable. The costs quoted below range from several percent less (for power cable) to ten to fifteen percent less (for grounding cable) than Qwest's (proprietary) figures for similarly sized cable. I recommend that the Commission require an average of the two quotes to be used for Qwest's power and grounding cable costs. (It is likely that Qwest's costs are even lower because of its ability to negotiate discounts.)

Table 1. Material Costs for Power Cable ($ per foot)

Cable Size	RS Means (XHH)	Cobra Wire & Cable (RHW-LS)	Average
#6	0.28	0.644	0.46
#4	0.40	0.834	0.62
#2	0.61	1.060	0.84
1/0	0.94	1.594	1.27
2/0	1.16	1.886	1.52
4/0	1.84	2.665	2.25
350 kcmil	3.00	4.080	3.54
500 kcmil	4.25	6.620	5.44
750 kcmil	6.85	9.319	8.09

- For the larger RHW-LS cable sizes (500 kcmil and 750 kcmil), the more expensive Flex cable is quoted. The non-flex cable costs are $5.54 and $7.71, respectively. Both XHH and RHW-



WILLIAM A. MUNDELL
Chairman
JAMES M. IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF INVESTIGATION INTO U S WEST COMMUNICATIONS, INC.'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	DOCKET NO. T-00000A-00-0194

Errata

to the Direct Testimony of

ROY LATHROP

on Behalf of

the Joint Case of

WORLDCOM, Inc.

AT&T Communications of the Mountain States, Inc.

and

XO Arizona, Inc.

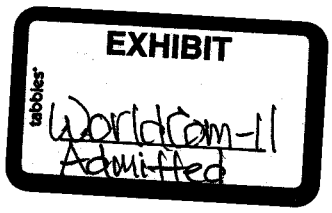
June 25, 2001

direct testimony were for bare stranded copper wire. Although Qwest's grounding specifications appear to permit stranded bare copper wire, the preferred application is insulated copper wire.) The modified price quotes obtained from RS Means, as well as the modified average quotes appear in the table below.

Table 1. Material Costs for Grounding Cable ($ per foot)

Cable Size	RS Means (XHH)	Cobra Wire & Cable (RHW-LS)	Average
#6	0.28	0.644	0.46
#2	0.61	1.060	0.84
1/0	0.94	1.594	1.23
4/0	1.84	2.665	2.25
350 kcmil	3.00	4.08	3.54
500 kcmil	4.25	5.54	4.90
750 kcmil	6.85	7.71	7.28

Third, in developing the space construction charge (for caged and cageless collocation) to be recovered over five years, an "unloaded" cost (i.e., prior to the application of cost factors) was used, rather than the loaded cost. The correct approach to developing these cost elements begins with the proposed space construction cost which is multiplied by the loading factors recommended by Mr. Weiss. The product is then multiplied by a capital cost factor (which incorporates depreciation, capital costs and taxes) derived from the cost factors



BEFORE THE

ARIZONA CORPORATION COMMISSION

IN THE MATTER OF THE INVESTIGATION INTO QWEST CORPORATION'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	)	DOCKET NO. T-00000A-00-0194 Phase II

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and

XO Arizona, Inc.

May 16, 2001

Table 3. DS0 Block Costs

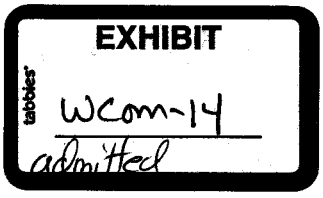
Block Type	Power & Telephone Supply	Verizon Supply	Average
410 Block	$288.65	327.12	307.89
89 Block	48.55	55.03	51.79
90-10 Mix	264.64	299.91	282.28

Line Sharing

In addition to the engineering charge for line sharing discussed above, other line sharing costs are also overstated. First, Qwest overstates costs by using an intermediate distribution frame ("IDF") in some line sharing configurations. An IDF is not technically necessary to complete a splitter connection for Qwest or for CLECs. Indeed, Qwest states, in explaining how a call is routed through a central office with collocation, that a call can go "directly from the COSMIC or MDF to the CLEC/DLEC's collocation area."[36] Requiring an IDF increases collocation costs unnecessarily by requiring additional cables, connecting blocks, cross connects, installation labor and the IDF itself.

Second, Qwest did not develop cable lengths on an objective, systematic basis to reflect the length of cable that would obtain in a newly-constructed central office, but instead used cable lengths based on "actual jobs." As discussed above, Qwest controls the placement of equipment in the central office and has no incentive to minimize cable lengths for collocators, as it would if it were placing equipment for itself. It

[36] Direct Testimony of James C. Overton, March 15, 2001 at page 20.



WILLIAM A. MUNDELL
Chairman
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Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF INVESTIGATION INTO U S WEST COMMUNICATIONS, INC.'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	DOCKET NO. T-00000A-00-0194

Errata

to the Direct Testimony of

ROY LATHROP

on Behalf of

the Joint Case of

WORLDCOM, Inc.

AT&T Communications of the Mountain States, Inc.

and

XO Arizona, Inc.

June 25, 2001

Q. PLEASE STATE YOUR NAME AND TITLE.

A. My name is Roy Lathrop. I am an Economist in the Regulatory Analysis group of WorldCom Inc.'s ("WorldCom") Law and Public Policy Section.

Q. ARE YOU THE SAME ROY LATHROP THAT FILED DIRECT TESTIMONY ON MAY 16, 2001 IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide a portion of Exhibit RL-1 (the NRCM User's Guide) that was inadvertently omitted from the CD that contained a variety of Exhibits. A paper copy of the NRCM User's guide is attached to this testimony. In addition, this testimony provides revised costs for certain collocation elements. These cost revisions arise as a result of the incorrect implementation of recommendations I made in my Direct Testimony regarding Qwest's collocation cost model. The implementation errors occur in four areas.

First, the land and building factors that I recommended in my direct testimony be set at zero for collocation cost elements were inadvertently left unchanged.

Second, I have changed the price quotes for grounding wire to be consistent with Qwest's deployment practices. (One set of grounding wire price quotes in my

direct testimony were for bare stranded copper wire. Although Qwest's grounding specifications appear to permit stranded bare copper wire, the preferred application is insulated copper wire.) The modified price quotes obtained from RS Means, as well as the modified average quotes appear in the table below.

Table 1. Material Costs for Grounding Cable ($ per foot)

Cable Size	RS Means (XHH)	Cobra Wire & Cable (RHW-LS)	Average
#6	0.28	0.644	0.46
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4/0	1.84	2.665	2.25
350 kcmil	3.00	4.08	3.54
500 kcmil	4.25	5.54	4.90
750 kcmil	6.85	7.71	7.28

Third, in developing the space construction charge (for caged and cageless collocation) to be recovered over five years, an "unloaded" cost (i.e., prior to the application of cost factors) was used, rather than the loaded cost. The correct approach to developing these cost elements begins with the proposed space construction cost which is multiplied by the loading factors recommended by Mr. Weiss. The product is then multiplied by a capital cost factor (which incorporates depreciation, capital costs and taxes) derived from the cost factors

recommended by Mr. Weiss to obtain the annual cost to be recovered over five years. The result is then divided by twelve to obtain the monthly cost to be recovered over five years.

Fourth, the per amp power plant usage cost development did not alter correctly the BDFB investment. In my Direct Testimony, I recommended that Qwest's power cost be adjusted to account for the fact that power usage greater than 60 amps does not use a BDFB, but instead is fed directly from the power plant. (This is consistent with Qwest's assumption, but not Qwest's implementation in its cost model.) I recommended three separate per amp power usage cost elements (and therefore charges) to correspond to this deployment method: a cost for power usage less than 60 amps that includes BDFB investment, a cost for power usage greater than 60 amps that excludes BDFB investment, and a cost for power usage equal to 60 amps that includes 35% of the BDFB investment to correspond to Qwest's model assumption that develops the cost for a 60 amp power feed based on a 35/65 blend of BDFB vs. power plant routing, respectively (and hence use of BDFB investment).

In developing the costs filed with my Direct Testimony, I removed the BDFB investment for power plant usage exceeding 60 amps (and that figure would remain unchanged, but for the application of land and building factors). For

power plant usage less than and equal to 60 amps, I included the BDFB investment but inadvertently failed to change Qwest's default model input from its assumption of 55% overall usage of the BDFB. Thus, while the approach to exclude the BDFB investment for power usage exceeding 60 amps was implemented correctly, the approach to retain the BDFB investment for power usage less than and equal to 60 amps was not implemented correctly because Qwest's model default (mistakenly left unchanged) resulted in retaining 55% of the BDFB investment. The corrected figures retains the full BDFB investment for power usage of less than 60 amps and 35% of the BDFB investment for power usage equal to 60 amps.

I have attached an Exhibit entitled AT&T/WorldCom/XO Joint Pricing Proposal Collocation Revisions which summarizes the results of implementing these changes. The Exhibit is marked as Exhibit RL-6.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

NON-RECURRING COST MODEL

Version 2.2

USER GUIDE

Non Recurring Cost Model
User Guide

1. General Introduction

The ***Non-Recurring Cost Model*** sponsored by AT&T and MCI is a spreadsheet based costing tool that calculates the forward-looking cost of customer connection, disconnection, and change of service. The model also calculates the costs of additional activities related to interconnection, unbundling, and wholesale service. This User Guide is provided to help the user step through the *NRC Model*. Additional detail is provided in the Model Description document.

To enhance the cost model's functionality and to facilitate ease-of-use, the model utilizes advanced features of **Microsoft Excel 7.0**; these features include *visual basic for applications* (VBA) macros and dialog boxes. The macros are routines that serve to automate repetitive processes and to simplify operations and calculations. The dialog boxes allow users to quickly and accurately choose NRC scenarios and to alter the numerous user-adjustable variables via drop-down boxes, check boxes, buttons, and spinners.

The model is composed of 19 unique sheets, including: nine standard Excel worksheets, five VBA module sheets, and five dialog sheets. The following sheets are visible at model start-up:

- *Control* - buttons to run and navigate the model and to present summary results
- *Processes & Calcs* - process steps, calculations, and inputs for the intersection of NRC type and required process
- *Inputs* - presents NRC elements and inputs from dialog box interfaces
- *Batch Output* - detailed outputs and costs for each NRC element
- *Input Record* - detailed record of the selected inputs compared to the default inputs
- *Glossary* - presents telephony acronyms, technical terminology, and descriptions

The following sheets are hidden at model start-up:

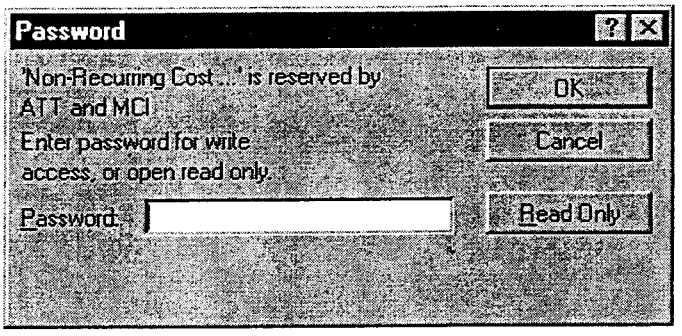
- *dlg NRC model* - first dialog box
- *dlg Customize Batch* - second dialog box
- *dlg Labor Rates* - third dialog box
- *dlg Other NRC* - fourth dialog box
- *dlg Instruction* - NRC Model user instructions
- Print Macro Button - sheet containing the button used for printing the Batch Output on a newly created workbook
- Batch PO Staging - a staging sheet used for printing Batch Output
- Batch Summary Tempy Sheet - a staging sheet used for printing Batch Output
- *Source Code* - visual basic for applications code
- *Copy Input Value Code* - visual basic for applications code
- *Save Option Code* - visual basic for applications code
- *Print File Batch Run Code* - visual basic for applications code
- *Other Inputs Code* - visual basic for applications code

Non Recurring Cost Model
User Guide

The hidden sheets can only be seen directly by going to the toolbar and using the **Format - Sheet - Unhide** command. These sheets are hidden because model users do not need to access these sheets to run the model.

2. Opening the Model

When the user opens the model they will see the following Password protection message.

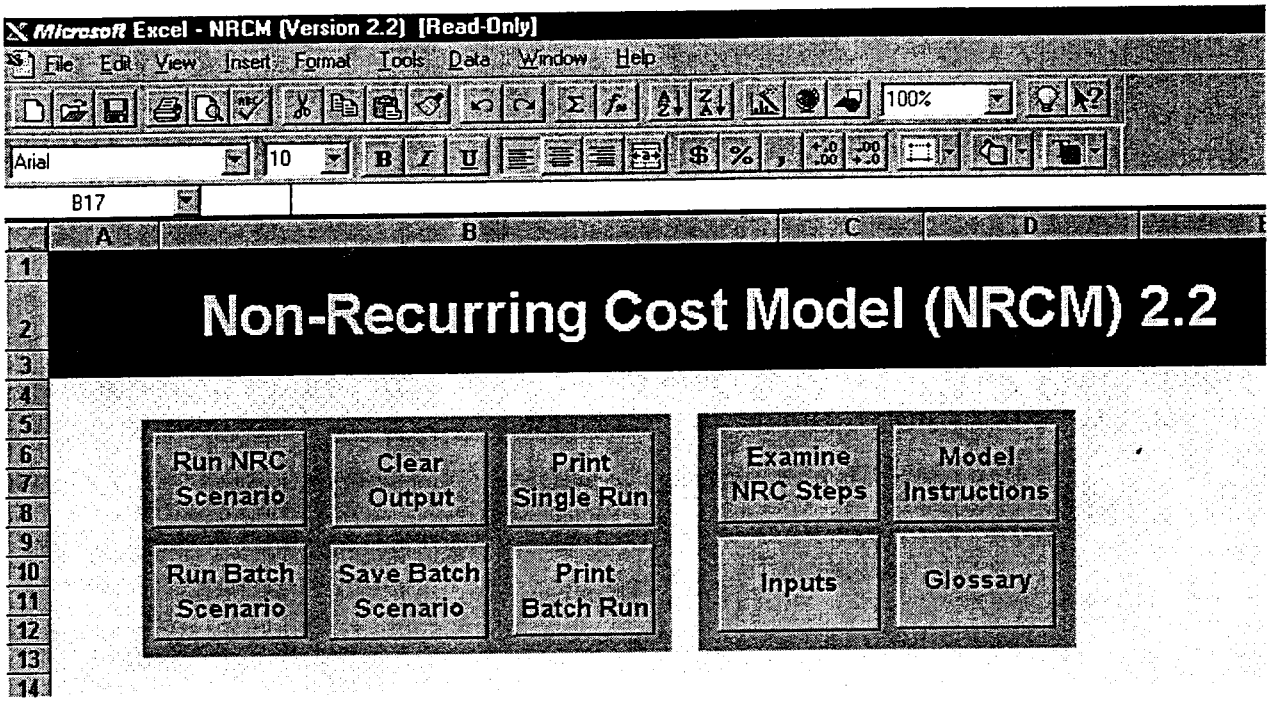


The model user must open the model by clicking the 'Read Only' option. The user will be able to do everything they need to do with the model with the 'Read Only' option. This protection ensures that the user will not inadvertently change the coding in the model. Once opened as 'Read Only' the file may be saved with a *different* file name.

Non Recurring Cost Model
User Guide

3. "Control" Sheet

When the user opens the ***Non-Recurring Cost Model*** they are presented with a "*Control*" sheet.



The "*Control*" sheet presents eight buttons to run and navigate the ***Non-Recurring Cost Model.***

On the left side of the sheet there are six buttons for running the model, printing output, clearing output, and saving data. The following is a description of the functionality provided by each button:

- *Run NRC Scenario* - used to calculate the cost of a single NRC element
- *Run Batch Scenario* - used to calculate the costs of all the NRC elements
- *Clear Output* - used to clear the output from the latest 'NRC Scenario' or 'Batch Scenario'
- *Save Batch Scenario* - used to save the summary data, the inputs, and the output detail for a 'Batch Scenario' to a separate Excel workbook
- *Print Single Run* - used to print the summary data and the inputs from a 'NRC Scenario'
- *Print Batch Run* - used to print the summary data, the inputs, and the output detail for a 'Batch Scenario'

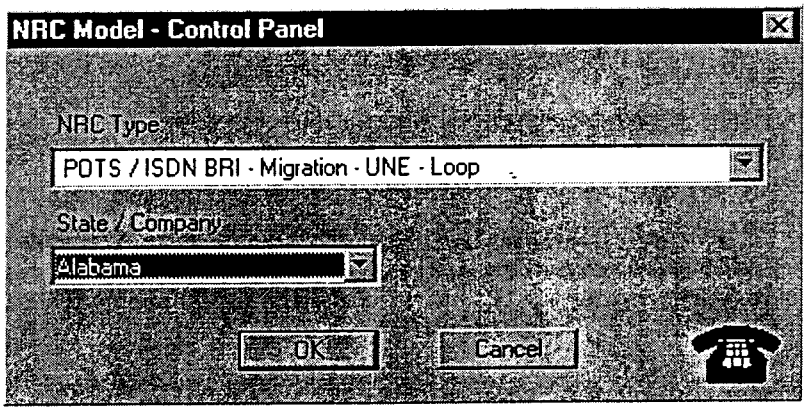
On the right side of the "*Control*" sheet there are four additional buttons. The buttons provide the following additional functionality:

- *Examine NRC Steps* - goes to the "*Processes & Calcs*" sheet where the specific steps costed for a particular NRC element or the complete table of processing steps may be viewed
- *Model Instructions* - used to call up a simple help tool
- *Inputs* - used to quickly go to the "*Input*" sheet
- *Glossary* - used to examine a list of telephony terms and acronyms by going to the "*Glossary*" worksheet

Non Recurring Cost Model
User Guide

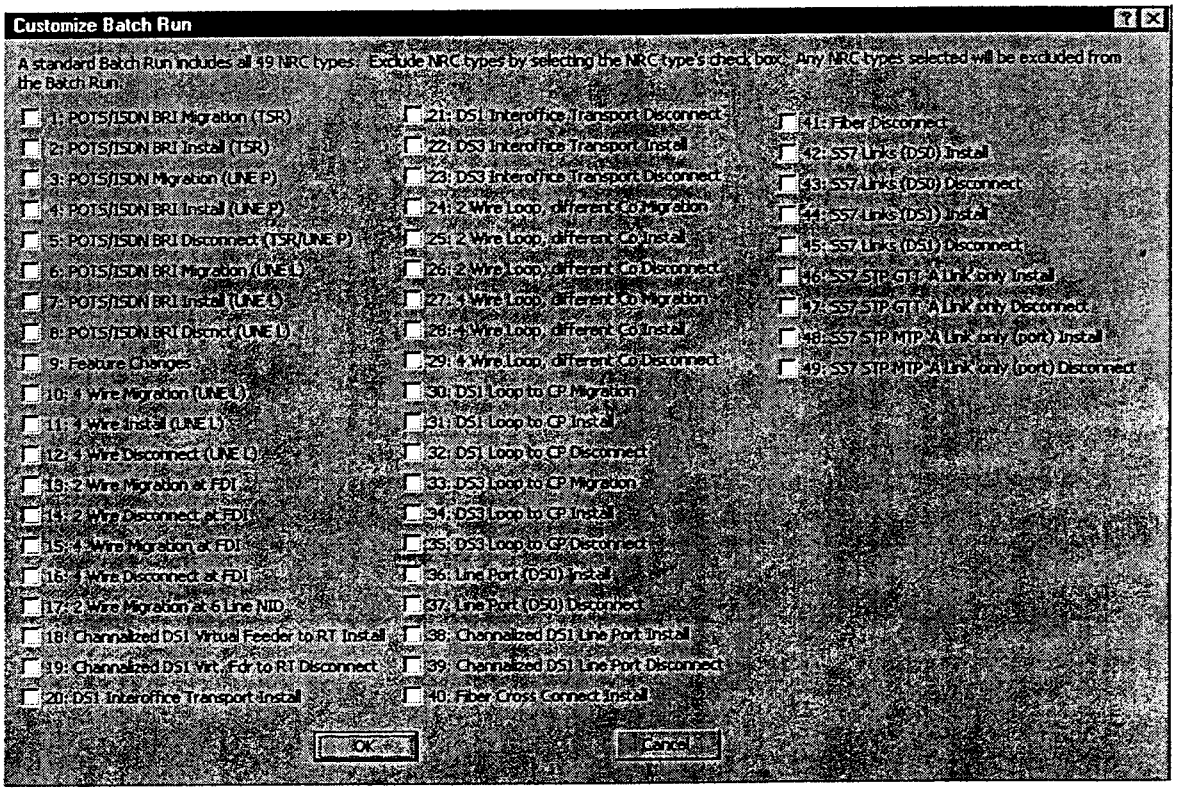
4. Dialog Boxes

The first dialog box, titled "*NRC Model - Control Panel*", allows the user to choose the type of non-recurring charge and the state. For Batch Runs, the NRC Type drop down box is not used because all the NRC Elements are included in a Batch Run.



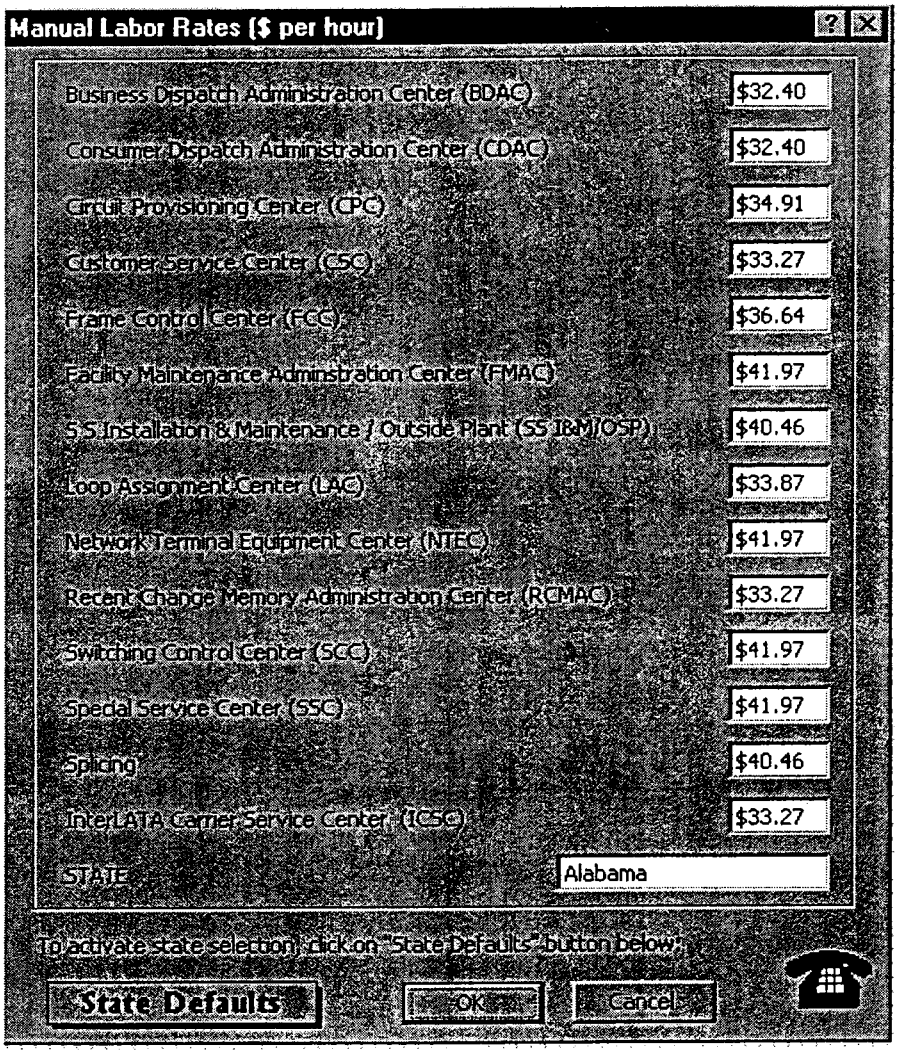
Non Recurring Cost Model
User Guide

The second dialog box, titled "*Customize Batch Run*" allows the user to **exclude** certain elements from the batch run. The user can exclude elements by checking the boxes that correspond to the element. If the user does not wish to exclude any elements, they should ensure that none of the check boxes are selected and then click the OK button to continue.



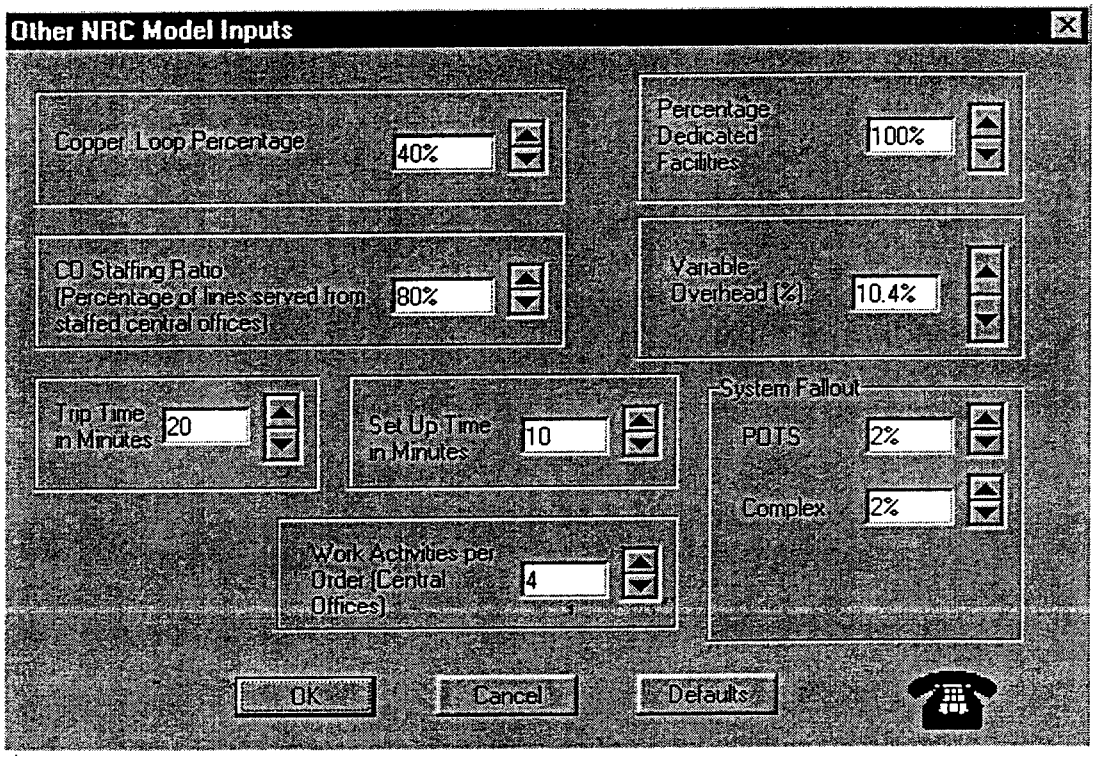
Non Recurring Cost Model
User Guide

The third dialog box, titled "*Manual Labor Rates ($ per hour)*" allows the user to set individual labor rates for 14 technician types. The lower edit box on this dialog box shows the state whose labor rates appear in the other edit boxes. When initially running the model for a state, the user must select the **State Defaults** button. The model will populate the edit boxes with the labor rates for the state. The user must then choose the OK button to continue to the next dialog sheet. If the lower edit box displays the correct name of the state chosen for a model run, the user can immediately click the OK button to continue to the next dialog box.



Non Recurring Cost Model
User Guide

The fourth and final dialog box, titled "*Other NRC Model Inputs*", allows the user to adjust nine categories of inputs; these categories include: the copper loop percentage, CO staffing ratio, trip time, setup times, work activities per order, variable overhead percentage, percentage dedicated facilities, and system fallout percentages for POTS and complex actions. The user can select the model's defaults by selecting the Defaults button. When the user is satisfied with the inputs click the OK button to continue.



5. Running the Model

To run the *Non-Recurring Cost Model* the user must first choose "*Run NRC Scenario*" or "*Run Batch Scenario*" from the "*Control Sheet*". After choosing one of these options, the user will be presented, in succession, with the four dialog boxes noted above. The user has the option to run the model with the default inputs or to adjust them.

When the user chooses *"Run NRC Scenario"*, the user will be presented with a summary output on the "*Control*" sheet; showing NRC element and cost. If the user wishes to see further detail they should use the "*Examine NRC Steps*" button. This button will take the user to the "*Processes & Calcs*" sheet. This sheet will be "filtered" for those activities required for the chosen NRC element. The user can go to the "*Inputs Record*" sheet to examine which of the inputs were used to create the current outputs.

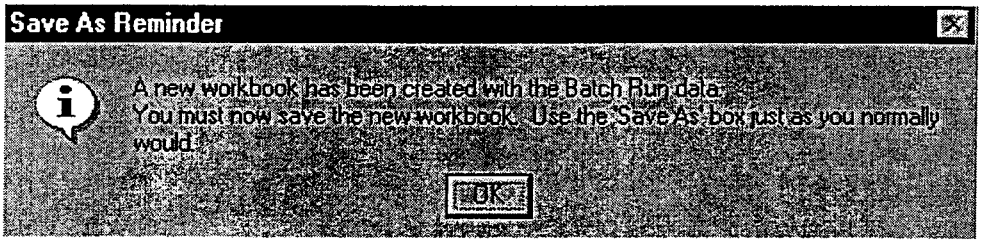
When the user chooses the "*Run Batch Scenario*" the model will produce a comprehensive summary list of NRC types and costs on the "*Control Sheet*". To examine all the required steps for each NRC element, the user should go to the "*Batch Output*" sheet. This sheet records all the steps required for each of the NRC types. Finally, the model also produces a list of the inputs used to create the "Batch Output" in the "Input Record".

Important Note

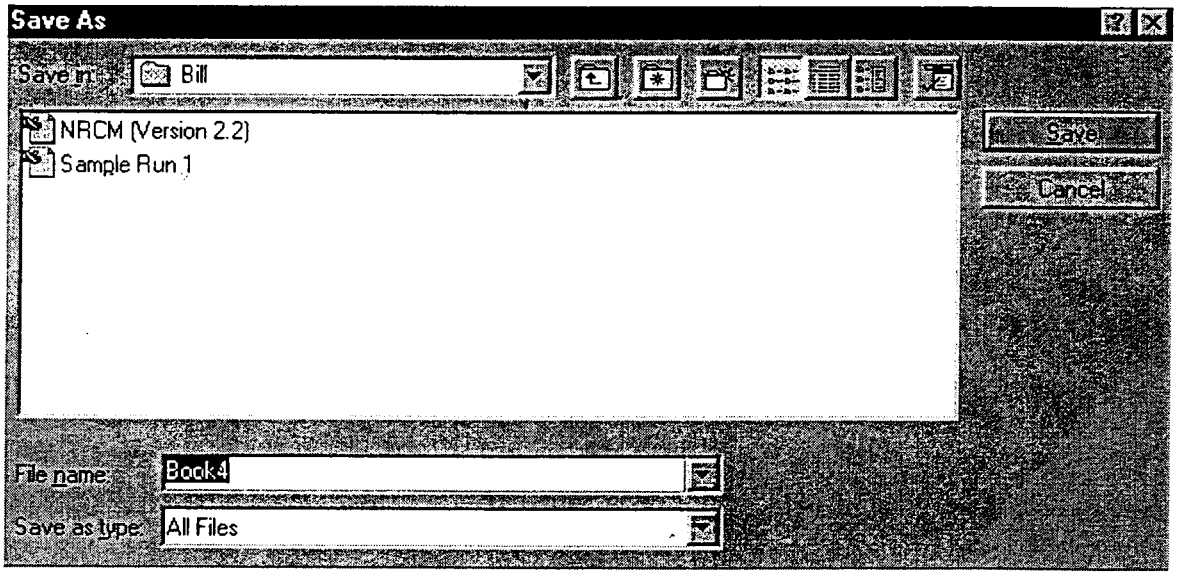
If the user runs another Scenario or Batch Run, the model will overwrite the contents of the "Control", "Batch Output", and "Input Record" sheets. If the user requires a permanent record of a Batch Run, they should use the save option outlined in section 6, page 11 of this users guide.

6. "Saving Batch Scenario" Data

By selecting the "Save Batch Scenario" button the model will save all the data relevant to a Batch Run in a separate Excel workbook. The workbook will include 4 sheets entitled: "*Print Macro Button*", "*Summary*", "*Batch Output*", and "*Input Record*". These sheets will contain the same data that resides in the sheets "*Control*", "*Batch Output*", and "*Input Record*" respectively. The model will prompt the user to save the new workbook.



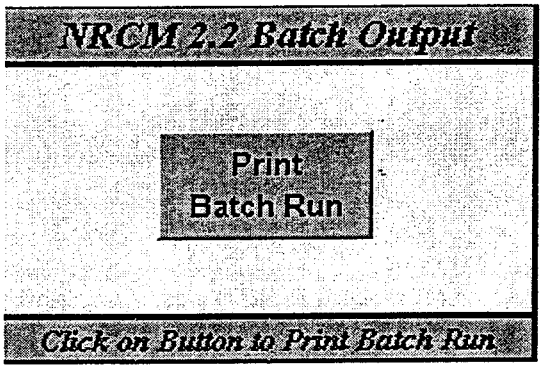
In addition, the user will be prompted to name and choose the directory for the newly created workbook with the following message screen:



The user should use this screen just as they normally would. When the user has named the workbook, the model will remind the user that the data has been saved in a new workbook, the new workbook is still open and return the user to the "Control" screen.

Non Recurring Cost Model
User Guide

Note: When the user chooses to return to the new workbook, the following "Print Batch Run" button will appear. Once the "Print Batch Run" button has been activated, the "Batch Output" sheet will print in its entirety.



7. Printing A "Batch Scenario"

The user can print all the data relevant to a "Batch Scenario" by clicking the "Print Batch Scenario" button on the "Control" sheet. This button invokes a print MACRO that will send three print jobs to the user's default printer. The list below details the three print jobs:

- 1st Print Job
  ⇒ Content - Summary of NRC Elements and costs from the "Control" sheet
  ⇒ Page length - 2 pages

- 2nd Print Job
  ⇒ Content - Summary of Inputs from the "Input Record" Sheet
  ⇒ Page length - 1 page

- 3rd Print Job
  ⇒ Content - "Batch Output" sheet in its entirety
  ⇒ Pages - 75 pages.

The print MACRO is an excellent time saver. However, the user must realize that the total pages sent to your default printer upon execution of the MACRO is 78 pages. (This may be slightly more or less depending on the printer used).

8. Examining Model Mechanics and Algorithms

The user may wish to examine the detail behind the costs for each NRC element. The user can go to the "*Processes and Calcs*" sheet to see the specific electronic and or manual steps that the model used to generate element costs. The example below shows how the user could view only those activities that take place for *POTS / ISDN - Migration - TSR*, the model uses Excel's **Data - Filter - Autofilter** function. By using this function, the "*Processes and Calcs*" sheet will only show activities in which the NRC element and activity step intersect, this intersection is marked by an "**X**". The user should note that NRC scenarios are placed in columns and the process steps are in rows.

NRC #	Alabama - NRC Elements	Total Cost		Total Cost	
3	POTS / ISDN BRI Migration (UNE Platform)	$ 0.21	<-- *with overhead*	$ 0.19	<-- *without overhead*

Reset Sorting Filter

SERVICE ORDER PROCESS / NON-RECURRING TYPE MATRIX

ID No.	Process Flow / Activity	Step	System or Action	Work Center	A Probability (%)	B Time (minutes)	C Rate ($/hour)
1	*Pre Order Steps*						
2	CLEC customer contact	Pre-Order	CLEC Customer Service Representative		NA	-	
3	CLEC requests customer address data, CSR, and appointment from ILEC	Pre-Order	CLEC gateway		NA	-	
4	ILEC gateway requests address data from Administrative Information System and CSR	Pre-Order	Premis, ALOC, BOSS, CRIS		100.0%	-	R
6	*Ordering Steps*						
7	CLEC customer service representative inputs LSR information into LOS	Order	ACTIVIEW		NA		
8	ILEC gateway receives, validates and logs LSR, returns FOC, and passes LSR to SOG	Order	ILEC gateway, STAREP, DOE		100.0%	-	R
10	ILEC SOG retrieves CSR data, formats and passes to SOP	Order	BOSS, SOP		100.0%	-	R
11	*Provisioning Processing Steps*						
13	SOP sends request to SOAC	Provisioning	SOP		100.0%	-	R
14	SOAC analyzes order, generates assignment requests for OSP, COE, IOF, etc.	Provisioning	SOAC		100.0%	-	R
20	SOAC receives COE, OSP, IOF, etc.	Provisioning	SOAC		100.0%	-	R
27	SOAC delivers recent change translation information	Provisioning	MARCH (ASAP for ISDN BRI)		100.0%	-	R
29	MARCH updates LDS	Provisioning	MARCH (ASAP for ISDN BRI)		100.0%	-	R
198	*Fall Out Steps*						
199	Fall Out: RMAs forwarded to PAWS for reconciliation	Provisioning	CPU Time		2.0%		R
200	Fall Out: Pull and analyze order: RCMAC	Provisioning	ILEC manual activity	RCMAC	2.0%	2.50	$ 33.27
201	Fall Out: Resolve fallout: RCMAC	Provisioning	ILEC manual activity	RCMAC	2.0%	15.00	$ 33.27
217	*Close Order Provisioning Steps*						
218	SOAC updates SOP	Provisioning	SOAC		100.0%	-	R
219	SOAC updates WFA, NSDB, LMOS, BOSS, CRIS, etc.	Provisioning	SOAC		100.0%	-	R
221	SOP completes LSR	Provisioning	SOP		100.0%	-	R
222	ILEC gateway notifies CLEC of completed order	Provisioning	ILEC gateway		NA		
223	ILEC billing system issues final bill to migrating customer	Provisioning	ILEC gateway		NA		
224	*End of Process Steps*						

AT&T/WORLDCOM/XO JOINT PRICING PROPOSAL
COLLOCATION REVISIONS

		Joint AT&T/ Worldcom/XO Pricing Proposal Original		Joint AT&T/ Worldcom/XO Pricing Proposal Revised	
		Joint Proposal		Joint Proposal	
		Recurring	NRC	Recurring	NRC
COLLOCATION					
Collocation Entrance Facility, per fiber pair					
Standard per Fiber pair		$8.58		$8.16	
Cross Connect per Fiber		$12.57		$12.23	
Express per Cable		$133.66		$129.83	
-48 Volt DC Power Usage, per Ampere, per Month					
Power Plant, per amp	<60 amps	$9.56		$10.85	
	>60 amps	$7.45		$7.18	
	=60 amps	$8.19		$8.46	
AC Power Feed (Backup Power)					
AC Power Feed – per Amp, per Month					
120 V		$16.85		$16.62	
208 V, Single Phase		$29.20		$28.80	
208 V, Three Phase		$50.52		$49.83	
240 V, Single Phase		$33.69		$33.23	
240 V, Three Phase		$58.29		$57.49	
480 V, Three Phase		$116.58		$114.99	
Interconnection Tie Pairs (ITP)					
Per DS1		$1.33		$1.28	
Per DS3		$13.39		$12.91	
Central Office Clock Synchronization					
Synchronization – Composite Clock, per Port		$6.48		$6.25	
Equipment Bay -recurring, per Shelf		$3.16		$3.04	
Space Construction					
5 year payments (recurring for 5 yrs)		$39.80		$48.23	
on-going maintenance		$2.52		$3.06	
Space Construction (Standard 60 Amp Power Feed)					
Site Preparation					
Cage- Up to 100 Sq. Ft	5 yr payments	$68.46		$84.71	
	maintenance	$4.34		$5.37	
Cage- 101- 200 Sq. Ft	5 yr payments	$80.68		$99.83	
	maintenance	$5.12		$6.33	
Cage- 201- 300 Sq. Ft	5 yr payments	$89.79		$111.11	
	maintenance	$5.69		$7.04	
Cage- 301- 400 Sq. Ft	5 yr payments	$97.18		$120.25	
	maintenance	$6.16		$7.62	
Grounding					
2/0 AWG - per Foot		$0.0171	$11.29	$0.0146	$9.60
1/0 AWG - per Foot		$0.0285	$18.79	$0.0250	$16.48
4/0 AWG - per Foot		$0.0324	$21.35	$0.0279	$18.38
350 kcmil - per Foot		$0.0449	$29.62	$0.0428	$28.22
500 kcmil - per Foot		$0.0501	$33.01	$0.0461	$30.42
750 kcmil – per Foot		$0.0767	$50.57	$0.0745	$48.09

CERTIFICATE OF SERVICE

ACC Docket No. T-00000A-00-0194

I hereby certify that on the 25th of June 2001, the original and ten (10) copies of ***WorldCom, AT&T, and XO's Notice of Filing Errata***, in the above-referenced matter, were sent via FedEx next business morning delivery to:

Docket Control
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007

And, I further certify that on the 25th day of June 2001, three (3) copies of the above-named errata was sent via FedEx, next business morning delivery, to:

Jane Rodda Administrative Law Judge Hearing Division Arizona Corporation Commission 1200 West Washington Street Phoenix, AZ 85007

And one true and correct copy of the foregoihg was sent via FedEx, next business morning delivery, to:

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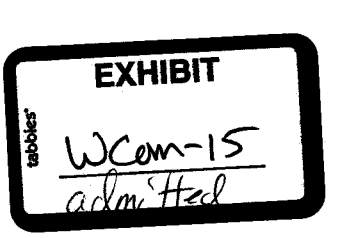
Dated this June 25, 2001 by Larry J. Weathers

LEWIS AND ROCA LLP LAWYERS



BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
CHAIRMAN

JIM IRVIN
COMMISSIONER

MARC SPITZER
COMMISSIONER

In the Matter of Investigation into US West Communications, Inc.'s Compliance with Certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts	Docket No: T-00000A-00-0194

Second Errata

to the Direct Testimony of

ROY LATHROP

on behalf of

The Joint Case of

WorldCom, Inc.

AT&T Communications of the Mountain States, Inc.

and

XO Arizona, Inc.

July 6, 2001

Q. PLEASE STATE YOUR NAME AND TITLE.

A. My name is Roy Lathrop. I am an Economist in the Regulatory Analysis group of WorldCom Inc.'s ("WorldCom") Law and Public Policy Section.

Q. ARE YOU THE SAME ROY LATHROP THAT FILED DIRECT TESTIMONY ON MAY 16, 2001 AND ERRATA TESTIMONY ON JUNE 25, 2001 IN THIS PROCEEDING?

A. Yes, I am.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to provide costs for certain collocation-related components that were unintentionally excluded from the recommendations made in my Direct Testimony. (The recommended costs failed to appear with the rest of my recommendations in Mr. Hydock's Exhibit MH-1 filed on May 16, 2001.)

For virtual collocation, the per shelf equipment bay cost is $3.16 per month. For cageless collocation, each additional equipment bay cost has two components, a monthly recurring cost spread over five years of $6.74 per month and an ongoing monthly recurring cost of $0.43 per month. In addition, in my Direct Testimony I proposed to cost separately power feed costs (as well as other

components) rather than agree with the structure of Qwest's proposed "space construction" cost (for caged and cageless collocation) that combines several components, including a power feed. While my recommended power feed costs appeared for caged collocation, the power feed costs for cageless collocation were not listed. Those costs appear below.

Feed Size	Recurring	Nonrecurring
20amp	$ 7.47	$ 4923.58
30amp	$ 8.44	$ 5567.14
40amp	$ 9.85	$ 6491.53
60amp	$12.04	$ 7935.89

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

LEWIS AND ROCA LLP
LAWYERS

ORIGINAL AND ten (10) copies of the foregoing hand-delivered this 6th day of July, 2001, to:

Arizona Corporation Commission
Utilities Division – Docket Control
1200 W. Washington Street
Phoenix, Arizona 85007

COPY of the foregoing hand-delivered this 6th day of July, 2001, to:

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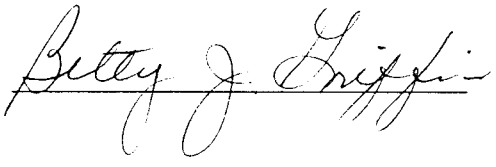

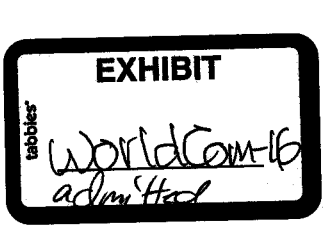

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
CHAIRMAN

JIM IRVIN
COMMISSIONER

MARC SPITZER
COMMISSIONER

In the Matter of Investigation into US West Communications, Inc.'s Compliance with Certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts	)	Docket No: T-00000A-00-0194

Summary of

the Testimony of

ROY LATHROP

on behalf of

The Joint Case of

WorldCom, Inc.

AT&T Communications of the Mountain States, Inc.

and

XO Arizona, Inc.

July 16, 2001

SUMMARY OF ROY LATHROP'S DIRECT TESTIMONY

My testimony provides the economic and technological assumptions underlying nonrecurring costs and collocation. Nonrecurring costs are primarily one-time transactional costs that do not include labor or capital costs for activities that recur regularly. Nonrecurring costs are critical to local market entry because they represent sunk costs that create a barrier to entry. The proper cost method to use to develop costs for NRCs is the same as that for recurring costs of unbundled network elements: forward-looking, long run economic costs. Using such a method requires developing costs based on using forward-looking operations supports systems efficiently, forward-looking technologies and efficient labor costs. Forward-looking NRCs exclude equipment costs, which are recovered over time, and treat separately disconnection costs, which may never be incurred. These attributes are consistent with features of the AT&T/WorldCom Nonrecurring Cost Model and inconsistent with Qwest's nonrecurring cost model, which Mr. Thomas Weiss critiques.

Collocation is a "nuts and bolts" activity by which CLEC equipment is placed in Qwest's premises. A fundamental aspect of collocation deployment is that Qwest controls the placement of collocators' equipment in its central offices. As a result, Qwest exerts almost complete control over the costs its competitors pay for collocation. With no incentive to minimize its competitors' costs, there is no assurance that Qwest will place equipment in the manner it would place its own equipment: so as to minimize the distance to the equipment to which it must connect. My testimony describes forward-looking costing as it applies to collocation and identifies a variety of ways in which Qwest's collocation cost model is inconsistent with forward-looking costing principles. I evaluate specific cost elements proposed by Qwest and recommend input changes to Qwest's collocation cost model more consistent with forward-looking costing principles. These inputs, combined with cost factors proposed by Mr. Weiss, were used to generate proposed rates that appear in the testimony of Mr. Michael Hydock.

ERRATA TESTIMONY

My Errata testimony explains four implementation errors made in modifying Qwest's collocation cost model. First, the land and building factors that I recommended be set at zero were inadvertently left unchanged. Second, grounding wire price quotes were changed to be consistent with Qwest's deployment practices. Third, the development of the space construction charge (for caged and cageless collocation) to be recovered over five years was corrected. Fourth, the development of three separate per amp power plant cost elements (based on whether or not a BDFB is used) was corrected.

SECOND ERRATA TESTIMONY

My Second Errata testimony provides proposed cost elements that were inadvertently omitted from the price proposal filed with Mr. Hydock's testimony.

RESPONSE TO QWEST'S TESTIMONY OF JUNE 27, 2001

Response to Mr. Fleming

--Quote Preparation Fee ("QPF") and Engineering Costs

Mr. Fleming acknowledges the "double recovery" of costs that results from assessing Qwest's QPF and space construction charges. He suggests crediting the QPF toward Qwest's space construction charge. The proposed remedy is insufficient in that it assumes what Qwest failed to prove: that its engineering costs were specifically and explicitly related to collocation arrangements, that costs were efficiently incurred and that demolition or reconstruction activities were not included in the engineering invoices, and there were no activities that benefited Qwest or other CLECs. In fact, Qwest has no idea what functions were performed for the engineering costs it paid because its engineering invoices lack any detail. Mr. Fleming mistakenly states that nothing indicates my estimates (for the QPF and engineering costs) include duplicate charges. My Direct testimony includes an alternative recommendation for engineering costs should the Commission reject my recommendation for the QPF. My combined recommendations regarding Qwest's QPF and engineering costs are conservative and provide Qwest with sufficient funds to perform these functions.

--Recurring versus Nonrecurring Costs

The theoretically correct method of cost recovery for reusable assets that constitute building improvements, such as collocation cages, is to recover the investment over the life of the building. (I recommend a five-year recovery period to balance the risk of potential over- and under-collection of costs between Qwest and collocators.) Qwest claims that collocation cages and other equipment will seldom be reused, based on Qwest's comment that only 11 of 73 collocation cancellations in Arizona have been assumed by a subsequent collocator. In response to discovery request ATT 09-209, however, Qwest provided no information to substantiate its claim that it will be denied cost recovery if collocation cage related investments are recovered on a recurring basis. Indeed, Qwest may collect more costs from cancelling collocators than it expends, given the size and the amount of engineering costs Qwest includes in its proposed QPF. Qwest's refusal to provide information regarding the cancelled collocations prevents it from substantiating its claim that its collocation cancellation history indicates facilities will seldom be reused. (Furthermore, Qwest may misunderstand a portion of my proposal, which applies to the "space construction" components, excluding engineering and power feeds.)

--Heating, Ventilating and Air Conditioning ("HVAC") and Electrical Costs

Mr. Fleming claims that Qwest's building rental rate includes only "centralized" system costs and that "distribution n etwork" costs are included in Qwest's space construction charge. This structure does not match Qwest's discovery responses. Mr. Fleming's claim implies that Qwest removed all "distribution" costs from its building costs, which is incorrect. Qwest's building cost study clearly shows that HVAC and electrical distribution costs remain for these facilities to reach collocation cages.

--Entrance Facilities

Mr. Fleming identifies a method of modifying Qwest's collocation cost model that appears to address more accurately my recommendation regarding Qwest's inappropriate assumption of building a separate entrance facility for CLECs only. While Qwest now proposes to assume a 10% incidence of a new separate manhole for CLECs only, my recommendation is consistent with a 0% incidence.

--Power Cables, Grounding Cable and Terminations

Mr. Fleming criticizes my proposed price quotes because Qwest's collocation cost model relies on what he claims are "actual receipts." These price quotes should be considered, and indeed represent a lower bound of Qwest's input prices, because they do not reflect discounts available to a large purchaser of such equipment. Qwest's receipts appear to support this claim with respect to DS0 terminations, for which Qwest's invoices show a substantially lower price than my recommendation.

Response to Mr. Kennedy

--Mr. Kennedy claims that Qwest's QPF is intended to recover the cost to prepare a quote that is subsequently cancelled. This is a claim not made by Qwest prior to this round of testimony. Clearly, Qwest's QPF is a misnomer in that it includes substantial engineering costs. I addressed Qwest's QPF above.

--Mr. Kennedy introduces various cancellation and decommissioning policies and costs for which no cost study has been provided.

--Mr. Kennedy criticizes my critique of individual case basis costs for security and space preparation that Qwest included as a "placeholder" in its SGAT filing in order to assess such charges in the future. Qwest should not be permitted to assess such duplicate charges.

--Mr. Kennedy suggests that CLECs should pay for channel regeneration where it is "unavoidable" but neglects to explain that Qwest controls the placement of collocators equipment, so the "avoidability" is actually under Qwest's control.

Response to Ms. Gude

Ms. Gude justifies the application of power, land and building factors to collocation-related costs by stating that these factors (a) apply to "jointly used" facilities that are outside collocators space, such as overhead cable racking, and (b) developing a power factor for only power-using facilities would be difficult. Ms. Gude fails to explain why collocators, who already pay directly for power and land and building, should pay more for facilities like overhead cable racking that use no power or floor space at all. My proposed solution to not apply such factors to collocation-related cost elements is not difficult to implement.

Response to Ms. Million

In response to a question from Commissioner Spitzer, I note that Ms. Million modified her recommended number of hours for CLEC-to-CLEC Engineering to be consistent with my recommendation of ten hours. Ms. Million did not explain why she did not make a similar recommendation for Line Sharing Engineering, for which the functions performed (according to Qwest's cost studies) are identical. Mr. Dunkel also recommended ten hours be used for Line Sharing Engineering. The prospect for competition would be enhanced by adopting rates consistent with forward-looking, efficient processes.

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
Chariman
JAMES M. IRVIN
Commissioner
MARC SPITZER
Commissioner

IN THE MATTER OF INVESTIGATION INTO QWEST CORPORATION'S COMPLICANCE WITH CERTAIN WHOLESLE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS	))))))	**Docket No. T-00000-A-00-0194 PHASE II**

DIRECT TESTIMONY OF EDWARD J. CAPUTO ON BEHALF OF WORLDCOM

MAY 16, 2001

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EXECUTIVE SUMMARY OF TESTIMONY OF EDWARD J. CAPUTO

Directory Assistance and Operator Services ("DA/OS") must be provided as UNEs unless Qwest provides customized routing. As a UNE, the pricing must be TELRIC or cost-based pursuant to Section 251(c)(3) of the Act. If Qwest does provide customized routing, it is still obligated to provide nondiscriminatory access to DA/OS pursuant to Section 251(b)(3). Nondiscriminatory access means that it must offer DA/OS services at the same price it offers those services to others, including itself. A market-based pricing methodology, therefore, is inherently discriminatory.

DAL information, on the other hand, is still a UNE and must be provided at TELRIC-based prices. Even if the Commission decides the FCC has not extended UNE status to DAL, the Commission is free to determine otherwise under Section 251. Moreover, DAL is also subject to the nondiscriminatory access provisions of Section 251(b)(3) and the Commission should adopt a nondiscriminatory pricing methodology based on cost.

Qwest's proposals and pricing regarding customized routing are too vague for Worldcom to comment upon except to the extent that they discriminate and impose unreasonable costs on other carriers. However, WorldCom would welcome an opportunity to discuss its routing needs with Qwest to determine whether its offerings would, indeed, be a viable option for WorldCom.

With regard to call related databases, Qwest is obligated to provide LIDB and ICNAM as UNEs at TELRIC-based prices. Worldcom also requests nondiscriminatory access to the ICNAM database on a bulk transfer basis. In addition, as UNEs, Qwest may not discriminate or impose use restrictions on these network elements through any alternate pricing schemes it may propose.

INTRODUCTION AND PROFESSIONAL EXPERIENCE

Q. Please state your name, title and business address.

A. My name is Edward J. Caputo. I am Director of Operator and Directory Services for WorldCom. My business address is 601 South 12th Street, Arlington, Virginia 22202.

Q. What is your educational background?

A. I attended the University of Maryland in College Park, Maryland, and earned a Bachelor of Science degree in Business Management. I am a candidate for a Master's degree in Telecommunications Management at George Washington University in Washington, D.C.

Q. Would you please provide a brief description of your professional experience?

A. I have held management positions in the telecommunications field for the last 11 years. Prior to that, I held management positions in the Information Technology and Finance field. I have had management responsibilities at WorldCom and its predecessor entity, MCI, since 1990 in the area of Operator and Directory Services.

PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to support the position of WorldCom, Inc. ("WorldCom") with regard to Qwest's pricing of customized routing, directory assistance and operator services ("DA/OS"), directory assistance listing ("DAL") databases, and call-related databases, specifically the line information database ("LIDB") and calling name database ("CNAM").

DA/OS SERVICES

Q. What are Qwest's obligations with respect to DA/OS?

A. The FCC, in its *UNE Remand Order*[1], specified that where the incumbent carrier does not provide customized routing, it must continue to offer DA/OS as UNEs pursuant to 47 USC § 251(c)(3). *UNE Remand Order* at ¶ 462. To the extent that Qwest may provide customized routing, however, Qwest remains obligated to provide DA/OS under the principles of "dialing parity" which includes the duty to allow nondiscriminatory access to DA/OS pursuant to 47 USC § 251(b)(3). *Id.*

Q. Is Qwest's proposed "market-based" pricing for DA/OS discriminatory?

A. Yes. Regardless of whether Qwest offers DA/OS as a UNE, at the very least, Qwest's pricing for DA/OS must be nondiscriminatory. As the *UNE Remand Order* made clear, "competitive carriers who wish to obtain OS/DA from the incumbent may do so consistent with the incumbent LEC's nondiscriminatory

[1] *Third Report and Order and Fourth Further Notice of Proposed Rulemaking*, CC Docket 96-98, FCC 99-238, released November 5, 1999 ("*UNE Remand Order*").

access obligations under Section 251(b)(3)." *UNE Remand Order,* at ¶ 455. See also, *DAL Provisioning Order* at ¶ 35,[2] regarding a LEC's obligation with regard nondiscriminatory access to its DA database.

"Nondiscriminatory" applies not only to what Qwest charges other carriers, but must also be relative to what Qwest charges itself. For example, even if Qwest were to overcharge every carrier, while its prices may be nondiscriminatory with respect to those other carriers, the prices would discriminate between Qwest and all other carriers. In its *Local Competition Third Report & Order*, the FCC stated that, "Because an incumbent LEC would have the incentive to discriminate against competitors by providing them with less favorable terms and conditions that it provides to itself, we conclude that the term "nondiscriminatory", as used throughout section 251, applies to the terms and conditions an incumbent LEC imposes on third parties as well as on itself."[3]

Because Section 251(b)(3) mandates nondiscriminatory access between all competitive providers, however, and especially because Qwest is the incumbent carrier, Qwest must provide DA/OS services at the same price it provides these services to itself. The only way to determine what price Qwest provides DA/OS

[2] *Provision of Directory Listing Information under the Telecommunications Act of 1934, As Amended,* CC-Docket No. 99-273, FCC 01-27, released, January 23, 2001 ("*DAL Provisioning Order*").
[3] *Local Competition Third Report & Order*, FCC 99-227, ¶ 129 (1999), citing *Local Competition Second Report and Order*, at ¶¶ 100-05, and *Local Competition First Report and Order*, at ¶ 217.

to itself, is for Qwest to provide a cost study in this proceeding, which it has not done.

Market-based prices are inherently discriminatory to competitive providers who have not had the advantage or have enjoyed the economic and market-based benefits of an entrenched incumbent as Qwest has. Consequently, such a market-based methodology has no basis being considered in this proceeding. Moreover, Qwest provides no evidence that the prices it proposes are grounded in the market or are market-based in any way. If the nondiscriminatory access requirement of Section 251(b)(3) is to be adhered to, the Commission must consider the costs based on a cost study and a market-based methodology must be rejected.

The FCC's *UNE Remand Order,* clearly stated, however, that although DA/OS may not be considered a UNE where customized routing is provided, Section 251(b)(3) will continue to obligate all carriers to provide nondiscriminatory access to DA/OS services. *See, UNE Remand Order,* at ¶ 464. Because Section 251(b)(3) mandates nondiscriminatory access as between *all* providers, however, and especially because Qwest is the incumbent carrier, Qwest must provide DA/OS services to Worldcom and other CLECs at the same price it provides these services to itself.

Qwest's testimony on this issue ignores the simple fact that the nondiscriminatory principles of dialing parity under Section 251(b)(3) of the Act must be applied to OS/DA services even where those services may be no longer unbundled.

CUSTOMIZED ROUTING

Q. What is Worldcom's position with respect to Qwest's customized routing?

A. Qwest must provide customized routing to WorldCom in a manner consistent with WorldCom's requirements and as prescribed by the FCC in its *UNE Remand Order*. Until Qwest meets these obligations, it must provide DA/OS to WorldCom and others as a UNE under Section 251(c)(3) of the Act at TELRIC rates. It is Worldcom's understanding, from language in the *UNE Remand Order*, that Qwest's obligation extends to all carriers and that this routing scheme must, in fact, be customized for each requesting carrier.

Qwest has indicated in the *Direct Testimony of Barbara J. Brohl*, at page 15, that it may in fact meet WorldCom's and other carrier's needs for customized routing. Despite the description in its testimony, however, WorldCom needs to meet with Qwest's switch engineering organization to document WorldCom's needs. Worldcom has developed an engineering proposal using existing local switch features and functionality which meets its customized routing needs.

WorldCom can provide Qwest with documentation that specifies WorldCom's customized routing requirements. If Qwest can meet WorldCom's customized routing needs, WorldCom should be able to request such routing at any time during the term of its interconnection agreement.

Q. What about Qwest's proposed pricing for customized routing?

A. Qwest does not propose an actual price for any of the three categories of charges it identifies under the customized routing category, but rather lists "ICB" or "individual case basis" as the appropriate amount. Based on the rate proposal introduced in this proceeding, however, it is impossible to determine whether Qwest's rates for customized routing are necessary, reasonable and nondiscriminatory. For example, Qwest's nonrecurring charge for "all other custom routing" is too vague and not defined especially to the extent that it would be levied on an individual customer basis. WorldCom requests that the Commission reject Qwest's attempt to levy charges in this area unless and until Qwest performs a valid cost study and until Qwest provides evidence that it has not already recovered such costs.

Moreover, Worldcom objects to Qwest's proposed pricing to the extent that such costs reflect Qwest's individual development costs to implement such a customized routing scheme as between all carriers. Consistent with Section 251(b)(3) and Section 251(c)(3) requirements, Worldcom believes that CLEC's should only be required to pay for routine implementation costs of customized

routing. To require otherwise would be both unreasonable and discriminatory.

Since the FCC has determined that the provision of customized routing is a condition precedent to the elimination of Qwest's duty to provide OS/DA services as a UNE under Section 251(c)(3), CLECs should then not be penalized if Qwest implements a high cost customized routing solution. If Qwest is allowed to simply push off the costs of developing a solution onto each individual competitive carrier, that carrier is not only burdened by the fact that it can no longer obtain DA/OS services at UNE rates, but then must bear the costs of developing a customized routing solution. Such a result is patently discriminatory not only to competitive carriers as a whole, but would allow Qwest to discriminate against carriers individually based upon their individual customized routing needs.

WorldCom also objects to Qwest's customized routing charges to the extent that it might force WorldCom to pay for switching services for which it already pays Qwest either on a facilities-based or UNE-P basis. Despite the fact that Qwest lists three separate categories of charges, Qwest does not provide enough detail to determine what substantive work is required to justify those charges.

DAL DATABASE

Q. How are DA/OS services different from DAL database information?

A. DAL information is the underlying customer listing information that constitutes the directory assistance database. DA/OS is a service or services related to assisting callers in finding a customer's listing or in completing a call. The two are not the same network elements. Although the FCC's *UNE Remand Order* reclassified DA/OS services as a UNE only in the absence of customized routing, the FCC identified DAL database as a call-related database.

Q. Is the database a UNE?

A. Yes, the DAL database is a UNE. The FCC identified directory assistance databases as call-related databases under the heading, "ELEMENTS THAT MUST BE UNBUNDLED" in its Executive Summary of the UNE Remand Order. *See, UNE Remand Order*, Executive Summary, ¶ 15. Although the FCC decided in its *UNE Remand Order* that DA/OS services were no longer UNEs, the *Order* did not specifically find that the DAL database itself was no longer a UNE. Although, the FCC did make clear that nondiscriminatory access is required for the DAL database under dialing parity as between all carriers, it is Worldcom's position that the FCC did not change the ILEC's responsibilities with regard to making the DAL database available as a UNE.

Furthermore, even if the DAL database is no longer considered a UNE by the FCC, there is nothing to prevent the State of Arizona from declaring it as such under Section 251 of the Act. The factors cited by the FCC in the UNE Remand

Order concerning the necessary and impair standard with respect to DA/OS services are not necessarily applicable with respect to the DAL database.

For example, although the FCC cited competition in the DA/OS services industry for the provision of DA/OS services, the fact that the ILEC remains the only reliable source for DAL information means that without such data from the incumbent, Worldcom is put at a direct competitive disadvantage. Because Qwest remains the largest presence in the local market by virtue of its incumbency and gleans its DAL information directly from the customer service order process, it alone has direct access to the most accurate and comprehensive DAL database in the market. Accordingly, Qwest should offer nondiscriminatory prices at TELRIC-based prices to other carriers.

Q. Is DAL pricing also subject to the nondiscriminatory requirements of Dialing Parity?

A. Yes. For the same reasons described earlier with regard to DA/OS, DAL is also subject to the Act's nondiscriminatory provisions regarding dialing parity pursuant to Section 251(b)(3) of the Act. This obligation is in addition to an ILEC's obligation to provide DAL as a UNE, as ALL CARRIERS are required to allow nondiscriminatory access to DAL pursuant to dialing parity.

In the FCC's recent *DAL Provisioning Order*, the FCC recognized that LECs continue to charge competing DA providers like WorldCom, discriminatory and unreasonable rates for DAL. Although it declined to adopt a specific pricing

structure for DAL, it encouraged states to set their own rates consistent with the nondiscriminatory and reasonable requirements of dialing parity. In doing so, the FCC specifically recognized that state imposed rates based on cost-based models utilizing valid cost studies were consistent with dialing parity. The Commission specifically cited a decision of the New York PSC that analyzed cost studies from the ILEC and other LECs to arrive at a cost-based price model for the nondiscriminatory provision of directory assistance. *DAL Provisioning Order* at ¶38, footnote 99.

Q. What should the Commission use to determine pricing for DAL?

A. Despite the fact that DAL is a UNE and should be made available at TELRIC, the Commission should also consider the nondiscriminatory access provisions of Section 251(b)(3) of the Act and the fact that meaningful competition must be ensured. An analysis under these two principles will produce a similar cost-based result consistent with the Act.

1. As discussed earlier with regard to DA/OS, Qwest's prices must not only reflect what it charges other carriers, but nondiscriminatory pricing must also be relative to what Qwest charges itself. Because Qwest is the competing incumbent carrier controlling access to the only meaningful DAL data, Qwest should not be allowed to discriminate against those carriers with whom it competes. Therefore, those prices, or costs, which Qwest incurs in acquiring

DAL should be the guiding factor with respect to rates others should pay for the data.

2. The Commission should ensure meaningful competition in the DA marketplace exists, and new and innovative DA services are fostered. These principles are the foundation upon which the Act itself was enacted.

There is no basis for imposing a "market rate" of 2.5 cents per initial listing and for each update. If a true market were to exist, then the rates would drive toward the cost of the data, which is clearly 3000 times less than Qwest's price. Such inflated prices threaten to barricade any meaningful competition in the market place and have the potential to cause competitors to drop out of the market where there would exist no incentive for further innovation.

There have been two publicly available cost studies that WorldCom is aware of that address the cost of providing the DAL Database that have set rates in the range of $0.001 to approximately $0.005. Perhaps most relevant is a cost study that was performed by Southwestern Bell Telephone Company ("SWBT") in Texas. That cost study indicated that the cost as found by SWBT in Texas was 0.001 cents per listing and a similar price per update. The State of Texas, therefore, required SWBT to provision DAL at those rates and to permit all carriers to use them for both local and interstate purposes. *See, Texas 1998-2000, Directory Assistance Listing Cost Study, Total Element Long Run Incremental*

Cost Study, Form 2; cited in, MCI Texas Arbitration Award, Docket 19075, at pages 12-14,1998.

In a second complete look at this issue, the State of New York also found that DAL should be provided at cost. *See, New York Verizon Tariff #916*, issued pursuant to NYPSC order No. 98-C-1 357 (February 8, 2000)*; cited in the DAL Provisioning Order at fn. 99.* This was the cost-study the FCC pointed to when it encouraged states to set their own rates. In that order, the NYPSC analyzed cost studies provided by Bell Atlantic, INFONXX, and Frontier to arrive at a cost-based price model for the nondiscriminatory provision of DAL. Under the New York scheme, WorldCom's DAL pricing is computed as follows: Initial full extract via electronic file transfer, non-recurring is $13,464. Daily updates, $3,637 per month. Stated on a per record basis, this would equate to a full initial transfer of $0.0014 per listing and daily updates monthly rate of $0.0051 per listing based on a base file of 9,900,000 listings and an average monthly update of 713,000 records.

Q. What is the price WorldCom charges QWEST for listings it provides to Qwest?

A. WorldCom does not charge any ILEC for the listings it provides to carriers at the present time.

Q. Please discuss Qwest's transport fee.

A. WorldCom objects to Qwest's insertion of a transport fee of $0.001 per listing. WorldCom has already expended financial and capital resources to build and maintain its own electronic system for receiving DAL information from Qwest known as NDM or "network data mover". Asking WorldCom to pay Qwest to transport the data over WorldCom's own facilities would be asking WorldCom to pay twice for transport and would unjustly enrich Qwest in this regard.

CALL-RELATED DATABASES (LIDB and ICNAM)

Q. Are Qwest's proposed charges for LIDB and CNAM reasonable?

A. The FCC has identified LIDB and CNAM (what Qwest identifies as "ICNAM") as call-related databases. As such, these call-related databases are UNEs and must be made available on a TELRIC or cost-basis. Qwest, however, has identified most of these to be priced on an individual case basis that would allow it to negotiate different prices for access to these services.

In addition to TELRIC pricing, however, as UNEs under Section 251(c)(3) of the Act, access to these elements must be on a nondiscriminatory basis, without use restrictions pursuant to Section 251(c)(3) of the Act. To the extent that individual case basis pricing reflects Qwest's desire to discriminate between carriers or force carriers to use these databases for only one type of service (e.g. "local-only" service), WorldCom objects to Qwest's proposal.

Q. How does Qwest describe the ICNAM service?

A. Qwest states that the ICNAM service allows CLECs to query Qwest's ICNAM database in order to secure the listed name information associated with the requested telephone number in order to deliver that information to the CLEC's end users. Qwest states that recurring charges for ICNAM are billed on a per query basis and a nonrecurring charge (CCSAC Options Activation Charge) will apply for a CLEC to activate ICNAM Database Query Service.

Q. As a matter of policy, should the Commission require Qwest to allow WorldCom full access to the Qwest ICNAM database?

A. Yes. CLECs should be able to obtain the entire contents of the CNAM database, rather than being restricted to access on a per dip basis. Just as in the case of Directory Assistance Data, offering the CNAM database in such a format is technically feasible and would allow access in the same manner used by Qwest. On the other hand, limiting access to a per-query or "dip" basis discriminates against WorldCom and other CLECs by giving Qwest an unfair advantage. It prevents CLECs from controlling the service quality and management of the database and restricts WorldCom's ability to offer other service offering that would enable it to compete effectively with Qwest in the provision of this UNE.

Q. Can you further explain why WorldCom should have access to the entire database?

A. Yes. This alternative should be made available for several reasons. First, CLECs who operate their own CNAM database are not restricted to the exact same service and process methods as offered or used by Qwest, thus allowing the potential for development of innovative services. Second, for some CLECs, the cost of obtaining the full contents of the database (as an UNE at TELRIC prices) and maintaining their own database may be more economical than requiring them to pay Qwest on a per-dip basis for every query. The Qwest proposed rate sets this price at just over $.002 per dip. Providing the alternative of bulk data provides potential cost savings to CLECs. Finally, a CLEC that operates such a database to support services for its own end users may also develop the capability to offer CNAM database service to other carriers. This situation would have similar public policy benefits to those provided by resale requirements.

Q. Are there other efficiencies that result from WorldCom having access to the entire database?

A. Yes. ICNAM allows the called customer premises equipment, connected to a switching system via a conventional line, to receive a calling party's name and the date and time of the call during the first silent interval in the ringing cycle. This is a very limited time frame within which to determine the name associated with the calling number. As the call reaches the terminating switch and a Caller ID

request is made, the request must route through the network to reach the database holding the "name" information. WorldCom must first determine which LEC owns the number, then route the call out to that LEC and back to make the "dip". If the LEC does not have the name, then exception-handling procedures must be used to find the name and the result is finally returned to the called party. The time it takes to route the number request to the correct LEC's database to make the dip, return the request, and provide exception handling when the number is not found in the database cannot always be completed within the short ring cycle required. If, however, WorldCom maintains its own database, via global access to Qwest's database, a lengthy step of the process could be eliminated, allowing WorldCom to provide service at least as good as Qwest provides for itself. Further, requiring WorldCom to "dip" Qwest's database rather than access its own CNAM database also forces WorldCom to incur development costs associated with creating a complex routing scheme within its network. Since Qwest already has its own database, it does not incur the same costs associated with implementing and maintaining a routing scheme. Thus, by enjoying

superior access to its CNAM data - data that cannot be accessed or used anywhere else except on a per query basis - Qwest limits WorldCom to an inferior service that it can provide more efficiently, quickly, and cheaply. For these reasons, WorldCom should have full access to Qwest's database; anything less is discriminatory.

Q. Have any states ordered that CLEC should have access to an entire ICNAM database rather than be restricted to access of a per-query basis?

A. Yes. The Michigan PSC ordered Ameritech Michigan to allow full access to the calling name database rather than being restricted to access on a per-dip basis.

Q. Please summarize WorldCom's position.

A. DA/OS services must be provided as UNEs unless Qwest provides customized routing. As a UNE, the pricing must be TELRIC or cost-based pursuant to Section 251(c)(3) of the Act. If Qwest does provide customized routing, it is still obligated to provide nondiscriminatory access to DA/OS pursuant to Section 251(b)(3). Nondiscriminatory access means that it must offer DA/OS services at the same price it offers those services to others, including itself. A market-based pricing methodology, therefore, is inherently discriminatory.

DAL information, on the other hand, is still a UNE and must be provided at TELRIC-based prices. Even if the FCC were to find DAL was not a UNE, it is still subject to the nondiscriminatory access provisions of Section 251(b)(3) and

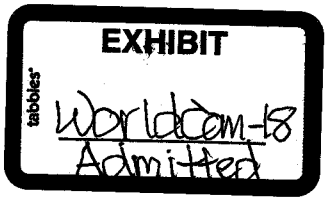
the Commission should adopt a nondiscriminatory pricing methodology based on cost.

Qwest's proposals and pricing regarding customized routing are too vague for Worldcom to comment upon. WorldCom would welcome an opportunity to discuss its routing needs with Qwest to determine whether Qwest's offerings would, indeed, be a viable option for WorldCom.

With regard to call related databases, Qwest is obligated to provide LIDB and ICNAM as UNEs at TELRIC-based prices. Worldcom also requests nondiscriminatory access to the ICNAM database on a bulk transfer basis. In addition, as UNEs, Qwest may not discriminate or impose use restrictions on these network elements through any alternate pricing schemes it may propose.

Q. Does this conclude your testimony?

A. Yes, it does.



BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
CHAIRMAN

JIM IRVIN
COMMISSIONER

MARC SPITZER
COMMISSIONER

In the Matter of Investigation into US West Communications, Inc.'s Compliance with Certain Wholesale Pricing Requirements for Unbundled Network Elements and Resale Discounts	)	Docket No: T-00000A-00-0194

Summary of

the Testimony of

EDWARD J. CAPUTO

on behalf of

WorldCom, Inc.

July 17, 2001

SUMMARY OF TESTIMONY OF EDWARD J. CAPUTO

Mr. Edward J. Caputo presented testimony to support the position of WorldCom, Inc. ("WorldCom") with regard to Qwest Corporation's ("Qwest") pricing of customized routing; directory assistance and operator services ("DA/OS"); directory assistance listing ("DAL") databases; and call-related databases, specifically the line information database ("LIDB") and inter-network calling name database ("ICNAM"). Mr. Caputo's positions are as follows:

- Qwest's proposals and pricing regarding customized routing are too vague for WorldCom to comment upon. WorldCom would welcome an opportunity to discuss its routing needs with Qwest to determine whether Qwest's offerings would, indeed, be a viable option for WorldCom.

- DA/OS services must be provided as UNEs unless Qwest provides customized routing. As a UNE, the pricing must be TELRIC or cost-based pursuant to Section 251(c)(3) of the Act. If Qwest does provide customized routing, it is still obligated to provide nondiscriminatory access to DA/OS pursuant to Section 251(b)(3). Nondiscriminatory access means that it must offer DA/OS services at the same price it offers those services to others, including itself. A market-based pricing methodology, therefore, is inherently discriminatory.

- DAL information is still a UNE and must be provided at TELRIC-based prices. Even if DAL was not a UNE, it is still subject to the nondiscriminatory access provisions of Section 251(b)(3) and the Commission should adopt a nondiscriminatory pricing methodology based on cost.

- With regard to call related databases, Qwest is obligated to provide LIDB and ICNAM as UNEs at TELRIC-based prices. WorldCom also requests nondiscriminatory access to the ICNAM database on a bulk transfer basis. In addition, as UNEs, Qwest may not discriminate or impose use restrictions on these network elements through any alternate pricing schemes it may propose.

SURREBUTTAL TO MS. BARBARA J. BOHL

Q. IS MS. BOHL'S CHARACTERIZATION OF THE INDUSTRY STANDARD ACCURATE FOR THE DELIVERY OF CNAM?

A. Ms. Bohl states that Qwest's use of the TCAP process for handling ICNAM queries follows industry guidelines. See, Page 5, lines 10-18. In her testimony she seems to suggest that because Qwest uses the industry standard , WorldCom will be harmed no less and no more than others regarding delays in providing caller ID information to the customer.

This reasoning, however, does not respond to the problem I originally identified regarding the 6 second time-frame within which WorldCom must provide the caller ID information. While Qwest can certainly provide the information within this time-frame, WorldCom, whose customers would be calling in from all over the country for other numbers country-wide, must take an extra step to decide which ILEC to send the data dip. WorldCom believes that it would have difficulty meeting the 6 second requirement because its system must be configured to accommodate dips from at least eight different databases instead of one. Having a centralized database, like the one enjoyed by Qwest would eliminate this unnecessary step and enable WorldCom to provide CNAM in the same manner as Qwest.

Q. HAS QWEST ADDRESSED WORLDCOM'S CONCERNS REGARDING THE PRICE FOR CUSTOM ROUTING IN ITS' REBUTTAL TESTIMONY?

A. No. Ms. Brohl's rebuttal testimony regarding the costs and pricing of customized routing does not address those issues raised in my prior Direct Testimony.

In my Direct Testimony I stated that it was impossible, based on the information submitted by Qwest, to determine whether Qwest's rates for customized routing are necessary, reasonable and nondiscriminatory. WorldCom renews its request that the Commission reject Qwest's attempt to levy charges in this area unless and until Qwest performs a valid cost study and until Qwest provides evidence that it has not already recovered such costs. WorldCom also objects to Qwest's proposed pricing to the extent that such costs reflect Qwest's individual development costs to implement such a customized routing scheme as between all carriers. WorldCom believes that CLEC's should only be required to pay for routing implementation costs of customized routing consistent with Section 251 (b)(3) and Section 251 (c)(3) of the Telecommunications Act of 1996.

SURREBUTTAL TO MS. MILLION

Q. IS QWEST'S STATEMENT THAT IT NEED ONLY BE WILLING TO PROVIDE CUSTOMIZED ROUTING AT TELRIC RATES, EVEN IF THOSE RATES ARE DEVELOPED ON AND INDIVIDUAL CASE BASIS, IN ORDER TO BE EXEMPT FROM THE REQUIREMENT TO TREAT OS/DA AS A UNE UNDER THE FCC'S RULES ACCURATE?

A. No. It is irrelevant whether Qwest is willing to provide customized routing at TELRIC rates regardless of the way in which those rates may be offered or developed. The FCC's rules are clear and require that LEC's must actually provide customized routing to requesting carriers otherwise LEC's must provide OS and DA services as a UNE.

QWEST

COST DOCKET

NO. T-00000A-00-0194

Z-Tel ORIGINAL EXHIBITS

PUBLIC

BEFORE THE ARIZONA CORPORATION COMMISSION

WILLIAM A. MUNDELL
CHAIRMAN
JIM IRVIN
COMMISSIONER
MARC SPITZER
COMMISSIONER

FILE
ORIGINAL

IN THE MATTER OF INVESTIGATION INTO U S WEST COMMUNICATIONS, INC.'S COMPLIANCE WITH CERTAIN WHOLESALE PRICING REQUIREMENTS FOR UNBUNDLED NETWORK ELEMENTS AND RESALE DISCOUNTS.

Docket No. T-00000A-00-0194

DIRECT TESTIMONY

OF

GEORGE S. FORD

ON BEHALF OF Z-TEL COMMUNICATIONS, INC.

May 16, 2001

DIRECT TESTIMONY OF GEORGE S. FORD

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is George S. Ford. I am the Chief Economist for Z-Tel Communications, Incorporated (Z-Tel). My business address is 601 South Harbour Island Boulevard, Suite 220, Tampa, Florida 33602.

Q. BRIEFLY DESCRIBE YOUR EDUCATIONAL BACKGROUND AND RELATED PROFESSIONAL EXPERIENCE..

A. I received a Ph.D. in Economics from Auburn University in 1994. My graduate work focused on the economics of industrial organization and regulation with course work emphasizing applied price theory and statistics. In 1994, I became an Industry Economist for the Federal Communications Commission's Competition Division. The Competition Division of the FCC was tasked with ensuring that FCC policies were consistent with the goals of promoting competition and deregulation across the communications industries. In 1996, I left the FCC to become a Senior Economist at MCI WorldCom where I was employed for just over three years. While at MCI WorldCom, I filed declarations and economic studies on a variety of topics with both federal and state regulatory agencies. In addition to my professional experience, I was an Affiliated Scholar with the Auburn Policy Research Center at Auburn University in Alabama. Through this professional relationship, I maintained an active research agenda on communications issues and have published research papers in a number of academic journals including the *Journal of Law and Economics*, the *Journal of Regulatory Economics*, and the *Review of Industrial Organization*, among others. I am also a co-author of the chapter on local and long distance competition in the *International Handbook of Telecommunications Economics*. I regularly speak at conferences, both at home and abroad, on the economics of telecommunications markets and regulation.

Q. COULD YOU DESCRIBE Z-TEL'S SERVICE OFFERINGS?

A. Z-Tel is a Tampa-based, integrated service provider that presently provides competitive local, long distance, and enhanced services to over 350,000 residential consumers in twenty

states including New York, Pennsylvania, Massachusetts, Texas, Michigan, Georgia, Illinois, among others. Z-Tel plans to expand nationally as the unbundled network element platform ("UNE-P") becomes available at TELLURIC rates. The company's goal is to offer a competitive service to the residential consumers of every state.

Z-Tel's service is not just a simple bundle of traditional telecommunications services, but is unique in that is combines its local and long distance telecommunications services with Web-based software that enables each Z-Tel subscriber to organize his or her communications, including email, voicemail, fax, and even a Personal Digital Assistant (PDA), by accessing a personalized web-page via the Internet. In addition, the personal Z-Line number can be programmed to follow the customer anywhere he or she goes via the "Find Me" feature. Other service features include low long distance rates from home or on-the-road and message notification by phone, email, or pager. Customers can also initiate telephone calls (including conference calls in the near future) over the traditional phone network, using speed-dial numbers from their address book on their personalized web page.

Q. WHAT INTEREST DOES Z-TEL COMMUNICATIONS HAVE IN THIS PROCEEDING?

A. Z-Tel's service is a bundle of many different communications services including voicemail, email, fax, Internet, PDAs, and local and long distance telecommunications into an easy-to-use communications control center. An important element of that bundle is local exchange telecommunications service. To provide the local exchange portion of its service offering, Z-Tel must purchase unbundled network elements from incumbent local exchange carriers like Qwest. At present, Z-Tel's primary means of providing local exchange service provision is UNE-P. Because Z-Tel is dependent upon the local exchange carrier's UNEs to provide service at this time, Z-Tel has a strong interest in ensuring the rates established for UNEs are TELRIC compliant and conducive to competitive entry.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this proceeding is to establish the rates for unbundled elements (UNEs) for Qwest in the state of Arizona, and my testimony will focus on UNE rates. These rates will establish, to a large extent, the cost structure of competitive local exchange carriers seeking to enter the Arizona market. The goal of these potential entrants is to provide business and

residential consumers a choice as to who provides their local exchange telecommunications services. Today, consumers can make a choice as to what carrier provides their long distance service, wireless service, paging service, and Internet service from a large number of providers. However, consumers are constrained in their choices with respect to local exchange services. The purpose of this proceeding, hopefully, is to change that fact and open all telecommunications markets to competition. Whether or not the *Telecommunications Act of 1996* is a success or failure for Arizonians depends critically on the choices made in this proceeding – right here, right now.

Q. DOES Z-TEL PROVIDE SERVICE IN ARIZONA?

A. Z-Tel has a few operational customers in Arizona, so we are technically able to offer service in the state. Z-Tel certainly hopes to add Arizona to its current mass-market footprint of twenty states. However, the current UNE rates in Arizona, and those proposed by Qwest in this proceeding, preclude Z-Tel from offering service on a mass market level in the state. Hopefully, the outcome of this proceeding will change that business reality, so that the residential consumers in Arizona will have a choice as to who provides their local exchange telecommunications service. Z-Tel anxiously awaits the outcome of this proceeding, which will determine whether Z-Tel actively markets its innovative services in Arizona.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. In this testimony, my goal is to assist the Commission in making decisions that are critical and central to the development of local exchange competition in Arizona. My testimony is divided into three parts:

First, I provide the Commission an analytical framework for establishing TELRIC compliant rates that will promote competitive entry in Arizona. Evidence in this proceeding is likely to provide an entire range of "TELRIC compliant rates" from which the Commission must select. As a result, the Commission will need to go beyond mere "number-crunching" and must instead provide a reasoned basis, consistent with the purposes of the 1996 Act, for selecting a rate from the TELRIC "zone of reasonableness." The Commission should select TELRIC rates from the lower part of this range because that

decision will promote the availability of new services in Arizona from new, competitive entrants.

Second, I discuss how the FCC will review the rates adopted in this proceeding in a Qwest Arizona Section 271 application. In recent Section 271 orders, the FCC has explicitly laid out the manner in which it determines whether UNE rates are TELRIC compliant. The FCC's decisions discuss how the FCC will establish the TELRIC "zone of reasonableness" for all UNEs. In this portion of my testimony, I lay out this analysis in order to assist the Commission and Qwest, which undoubtedly should care whether its UNE rates will pass the FCC's analysis. This "TELRIC test" can be performed for any UNE rate.

Third, I perform the FCC's "TELRIC test" for unbundled loops, unbundled local switching, unbundled tandem switching, and unbundled shared transport. This analysis reveals that Qwest's proposed rates for these UNEs will, without question, fail the FCC's TELRIC test. Indeed, the rates for these UNEs are 30-420% higher than the FCC's analysis would permit. In addition, my discussion of unbundled loops includes a short discussion of the impact of Qwest's proposed rate for line-sharing as well as the efficacy of Qwest's line-sharing rate proposal.

Q. DO YOU HAVE ANY GENERAL COMMENTS ABOUT THE COMMISSION'S EVALUATION OF THE UNE RATES PROPOSED BY VARIOUS PARTIES IN THIS PROCEEDING?

A. Yes. It is important that the Commission have an analytical framework within which to evaluate proposed UNE rates. Without such a framework, rates will be determined willy-nilly and may bear neither a relationship to cost nor conducive to competitive entry – the dual standards of the *Telecommunications Act of 1996*. Furthermore, it is difficult to evaluate the proposals of particular parties if an analytical framework is not set forth. In other words, if the "ends" are not specified, it is nearly impossible to evaluate the reasonableness or effectiveness of the "means." In the end, this proceeding is about more than a number-crunching exercise: it is about whether Arizonans will benefit from competitive entry or not. An analytical framework for UNE rates allows the Commission to make its decision in this broader context.

Q. WHAT ARE THE IMPORTANT ELEMENTS OF AN ANALYTICAL FRAMEWORK FOR EVALUATING THE UNE RATES PROPOSED IN THIS PROCEEDING?

A. There are two primary elements in the analytical framework. First, as described in detail by the testimony of Qwest witness Theresa K. Million, the TELRIC standard provides one element of this analytical framework. The second element of the analytical framework – as important as the first – holds that the rates established in this proceeding should satisfy, to the greatest extent possible, the mandate of the *1996 Telecommunications Act* to promote competition in all telecommunications markets.

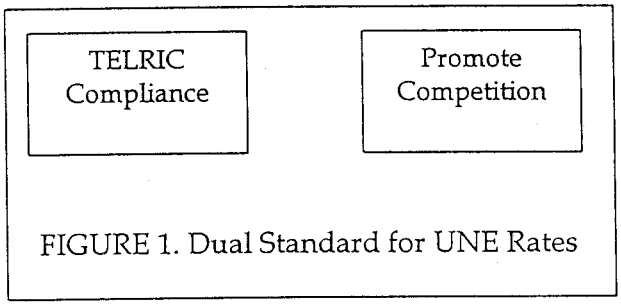


FIGURE 1. Dual Standard for UNE Rates

To apply this framework the Commission determines the TELRIC zone of reasonableness first. As I discuss below, the FCC has stated on several occasions that several rates or rate structures can be compatible with TELRIC pricing principles. Once that zone is established, the second portion of the analytical framework is for the Commission to choose the final rate consistent with the purposes of the Act. Most importantly, the Commission then needs to select a rate based on the impact of that rate on competition and competitive entry.

Q. WHAT ROLE DO UNE RATES PLAY IN THE REALIZATION OF COMPETITION IN LOCAL EXCHANGE MARKETS?

A. UNE rates play a central and key role in the evolution of competition in the local exchange market. Competitive entry by means of unbundled network elements pursuant to Section 251(c)(3) of the Act is one of the core entry mechanisms envisioned by Congress. Congress appropriately determined that in order for new entrants to compete against entrenched incumbents like Qwest, those entrants needed to be able to replicate quickly the economies of scale, scope and density that those incumbent, monopoly incumbents possess.

If UNE rates are set so high that a prospective entrant cannot earn a competitive return, then entry into the local exchange market and other local telecommunications markets will not occur. Competition requires multiple firms vying for the patronage of customers. To move from monopoly, the current situation, to an environment in which multiple firms compete, new firms must enter the market. Because entry is governed, to a large extent, by UNE rates, the UNE rates established in this proceeding will greatly impact the future of competition in Arizona's local exchange market – particularly for residential consumers.

Q. IF A UNE RATE IS TELRIC COMPLIANT, IS THAT ENOUGH FOR PURPOSES OF THE TELECOMMUNICATIONS ACT?

A. I do not believe so. The TELRIC standard is not so rigid as to produce a rate for each UNE. Rather, TELRIC pricing principles generate a "zone of reasonableness" where the boundaries of that zone are determined by what cost estimates can or cannot be defended with a TELRIC analysis. Relevant FCC orders are clear on this point. In other words, there is not single TELRIC rate, but a range rates that may comply with TELRIC pricing principles. A critical – but usually under appreciated – component of the Commission's analysis is what part of that zone would promote competitive entry.

Q. FOR CLARITY, WOULD YOU PLEASE PROVIDE AN EXAMPLE OF HOW THIS MIGHT PLAY OUT.

A. Sure. Assume that two cost studies, both of which choose a set of inputs that are TELRIC compliant, produce cost estimates for, say, a Network Interface Device (NID). The first model estimates the cost to be $0.50 per month while the second estimates the cost to be $1.50 per month. The differences in cost estimates arise from different assumptions about the cost-of-capital, depreciation schedules, and so forth. As the FCC observed, "The Act requires that UNE rates be just and reasonable, and in other contexts, we have determined that standard to mean that any of a number of inputs or results from within a certain range could be appropriate. *In the Matter of Joint Application by SBC Communications Inc., et al. for the Provision of In-Region InterLATA Services in Kansas and Oklahoma*, Memorandum Opinion and Order, FCC 01-29, CC Docket No. 00-217 (January 22, 2001) ("*OK-KS 271 Order*"), ¶ 91 (citations omitted). Assuming that the assumptions of both

models can be defended as TELRIC compliant, it may be that one model always chooses TELRIC compliant input values that tend to produce lower cost estimates while the other always chooses TELRIC compliant input values that tend to produce higher cost estimates.

In this situation, what is the Commission to do? Without an additional level to the analytical framework, how could the Commission justify selecting one TELRIC rate over the other? One potentially arbitrary solution would be for a state commission to simply take a simple average of the two numbers and set the UNE rate for the NID at $1.00. This approach might be reasonable if only the first criterion of the analytical framework is relevant. However, this arbitrary averaging concept is not consistent with the overarching, pro-competitive mandate of the *1996 Telecommunications Act.*

Clearly, choosing the $0.50 cost estimate to set the UNE rate is more conducive to competitive entry than either the $1.00 average cost or $1.50 cost estimate. While the Commission may choose to alter a few of the input values so that the lower cost estimate is $0.60 rather than $0.50, it is always the case that choosing cost estimates from the lower range of TELRIC compliant values will promote competition to a greater extent that estimates at the upper-end of the TELRIC 'zone of reasonableness.'

Q. HOW DO LOWER UNE RATES ENCOURAGE COMPETITION?

A. Competitive entry is driven by expected profitability. If Z-Tel can offer service and earn a reasonable return, then the company will do so. The company's goal is nationwide coverage, and our decision not to enter any particular state at a point in time is usually driven by UNE costs.

Z-Tel is not unique in this regard. In fact, since UNE rates represent a substantial portion of a CLEC's cost of providing telecommunications services, the final rates will have an appreciable and demonstrable impact upon entry. Given that CLECs are price takers – that is, we must offer service at something near existing market prices – any reduction in cost will increase the margin between revenue and cost, thus increasing expected profitability and, as a consequence, competitive entry.

Q. SHOULD RATES BE ESTABLISHED SOLELY TO INDUCE COMPETITIVE ENTRY?

A. No. The Act establishes two standards for rates. First, UNE rates must be set at costs, which (in practice) implies they must comply with the FCC's TELRIC pricing rules. The establishment of rates conducive to competitive entry is the second, not the only, criterion. The FCC clearly stated that the reasonableness of rates is not determined by the business case of potential entrants. *OK-KS 271 Order*, ¶ 65 ("incumbent LECs are not required . . . to guarantee competitors a certain profit margin."). Satisfying the TELRIC standard is, I believe, the first order of business.

However, the TELRIC standard establishes a zone of reasonableness, not a particular rate. Once the boundaries of the 'zone of reasonableness' are set, the second order of business is to choose rates from that part of the 'zone of reasonableness' for which entry is most feasible. In some cases, it may be that costs are simply too high to induce entry, even at the low end of the 'zone of reasonableness.' In other cases, however, entry may feasible for some part of the 'zone of reasonableness' but not for others. It is imperative that this Commission consider the entry impact of the selection UNE rates. The analysis is simple: lower UNE rates promote competition, higher UNE rates deter competition.

Q. IS YOUR ANALYTICAL FRAMEWORK SO GENERAL THAT QWEST WOULD AGREE?

A. With respect to the first criterion of TELRIC compliance, yes. Ms. Million's testimony specifically addresses that issue, but *only* that issue. Qwest likely would contest the second criterion. In contrast to the interest of the United States Congress and the vast majority of consumers, Qwest likely has no desire to adopt a framework that promotes competition. This observation is not necessarily a criticism of Qwest; the company is simply responding to its incentives, as any rational firm would do.

The question this Commission must answer is whether it wants to join Qwest in frustrating the competitive process or whether it wants to bring the benefits of competition to the households and businesses of Arizona. The cost testimony of the various parties, including my own, will assist the commission in establishing the bounds of the TELRIC

zone of reasonableness. Further, my testimony, and the testimony of other CLECs, will assist the Commission in promoting competition; Qwest is quite competent to lead the charge at impeding it.

Q. BUT SHOULDN'T THE FINAL RATES BE THE "OUTPUT" OF A FORMAL TELRIC COST MODEL?

A. Not necessarily. One could draw a distinction between rates determined by using a formal TELRIC cost model and rates that comply with TELRIC. In fact, the FCC's recent Oklahoma, Kansas, and Massachusetts 271 Orders seem to draw such a distinction.

In Oklahoma, for example, the state commission arbitrarily reduced a number of rates to bring those rates down to TELRIC levels. The discount was not based on TELRIC, but the FCC determined that the final rate was indeed TELRIC compliant. The FCC stated in the *OK-KS 271 Order*, "[w]hile the loop rates were not derived in total compliance with our TELRIC rules, this flaw is not fatal to SWBT's application. The discounts now available in Oklahoma compensate for the ALJ's use of a fill factor that was not compliant with TELRIC." *OK-KS Order*, ¶ 87. In the Massachusetts 271 Order, the FCC concluded, despite a number of flaws in the cost models used to generate cost estimates for Verizon-MA, "that any errors made by the Massachusetts Department in establishing loop rates were not so great as to render the resulting rates outside the range that a reasonable application of TELRIC principles would produce." *In the Matter of the Application of Verizon New England, Inc., et al. for Authorization to Provide In-Region InterLATA Services in Massachusetts*, Memorandum Opinion and Order, FCC 01-130, CC Docket No. 01-9 (April 16, 2001) ("*MA 271 Order*"), ¶ 33.

Q. PLEASE SUMMARIZE HOW THE ANALYTICAL FRAMEWORK IS APPLIED.

A. The most important point for the Commission to remember is that it's decision in this case is not limited to choosing input values and running calculations. In this proceeding, Qwest and other parties have proposed input values and other factors that the parties will debate throughout this proceeding. But in the end, the Commission will face a choice of what rate in the TELRIC zone of reasonableness to select. I want to stress the importance to the public interest it is to select rates in this zone that promote competitive entry.

For the most part, Qwest will offer assumptions and input values that increase UNE costs because Qwest prefers there be no competition. The CLECs, alternately, will offer assumptions and input values that decrease UNE costs so that offering a competitive local exchange service in Arizona is financially viable. In most cases, the input values recommended by the various parties to this proceeding will be supported by expert testimony and based, though sometimes loosely, on a reasoned analysis. There should be sufficient evidence on the record to expose those cases where recommendations are void of any merit or are inconsistent with TELRIC.

Facing a menu of model assumptions and input values, the Commission will be forced to conclude that, in general, there is no single "right" number but a range of "right" numbers. The first step of the analytical framework defines what this range of "right" numbers is, thereby establishing the TELRIC 'zone of reasonableness.' This step is the first step of the analytical framework.

Once these boundaries are established, the second part of the analytical framework is to be applied. Each input value, assumption, or resultant cost estimate should be classified according to its effect on competition. Because higher UNE rates reduce competition and lower UNE rates increase competition, assumptions and/or input values that increase the cost estimates decrease competition and those that decrease cost estimates increase competition. The final input values and assumptions accepted by the Commission should be chosen so that competitive entry is viable, *i.e.*, from that part of the "zone of reasonableness" associated with lower costs. The second part of the framework is certainly easier to implement than the first.

Q. IS IT POSSIBLE THAT CHOOSING LOWER UNE RATES WILL DISCOURAGE FACILITIES BASED COMPETITION?

A. No. The first criterion of the framework is that rates be TELRIC compliant. If rates are set well below TELRIC, it may be the case – but not necessarily the case – that CLECs will delay facilities deployment. But as long as rates are in the range of forward looking costs, deployment of facilities will not be impeded. CLECs will, in fact, make rational and efficient build-out decisions if UNEs are priced pursuant to TELRIC.

This is because TELRIC rates are designed to replicate this build-out decision. For example, long distance capacity can be purchased in a highly competitive market. The wholesale price for long distance capacity is generally consistent with what a TELRIC methodology would produce and does not vary based upon the historical basis of what any particular IXC network cost to build in the past. Rather than impede facilities deployment, however, interexchange fiber optic capacity increases annually at a rapid rate of growth. Having your "own" facilities has benefits that cannot be incorporated into the static and stale framework of a cost model or the overly simplistic comparative static arguments typically made in these proceedings regarding the "make or buy" decision of entrants. Further, the ILEC is a reluctant seller, forced by law and penalty mechanisms to offer services to CLECs. This situation raises other (generally intangible) costs of the deal by CLECs. As a result, CLECs will consider replacing ILEC facilities as soon as it is financially sensible, in terms of the full costs of the transaction, to do so. As a result, the full price of a UNE is not equal to the rate set in this proceeding; the full price always exceeds the UNE rate and includes these other intangible and hard to quantify costs.

Q. WHAT RATE ELEMENTS DOES YOU TESTIMONY COVER?

A. For a UNE-P provider serving residential customers, like Z-Tel, the most important cost elements are loops, switching, transport, and non-recurring charges. The bulk of my testimony is devoted to methods by which loop rates and switching costs can be determined in this proceeding. Included in my discussion of loop rates is an evaluation of the proposed line-sharing charges. Z-Tel does not, today, use line sharing. Nevertheless, charges for line sharing should affect the price of a loop and Z-Tel does purchase loops. Further, I believe some clarification on the economics of line-sharing is needed.

Q. HOW DO YOU EVALUATE THE PROPOSED RATES FOR UNES?

A. In the two most recent 271 Orders, the FCC set forth a simple methodology to determine whether a UNE rate in any state is consistent with another TELRIC-compliant rate in another state. In reaching a decision about the reasonableness of the loop rates in Oklahoma, the FCC used its Hybrid Cost Proxy Model ("HCPM") to compare the relative rates of Texas and Oklahoma. The FCC's analysis is as follows:

> In taking a weighted average of loop rates in Oklahoma and Texas, we find that Oklahoma's rates are roughly one-third higher than those in Texas. . . . Using a weighted average of wire-center loop costs, the USF cost model indicates that loop costs in SWBT's Oklahoma study area are roughly 23 percent higher than loop costs in its Texas study area (ft. omitted). We therefore attribute this portion of the differential, roughly two-thirds of it, to differences in costs. The remainder of the differential, however, is not *de minimus*, and we cannot ignore its presence.

OK-KS Order, ¶¶ 83-5 (citations omitted). As the Commission is aware, in that proceeding, in response to criticism from the Department of Justice and parties, SWBT offered "discounted rates." The determined that these new rates were TELRIC compliant as follows:

> The weighted average of the Oklahoma discounted loop rates is roughly 11 percent higher than the weighted average of the loop rates in Texas. This differential between Oklahoma promotional and Texas rates is well within the 23 percent differential suggested by the USF cost model, and so we conclude that the discounted rates meet the requirements of the Act

OK-KS 271 Order, ¶86 (citations omitted). The FCC's TELRIC test is a clear and straightforward methodology with which it is possible to evaluate the TELRIC compliance of Qwest's proposed UNE rates.

Q. WOULD YOU PLEASE SUMMARIZE THE FCC'S ANALYSIS?

A. Yes. In its initial filing, Southwestern Bell proposed a loop rate of $18.87 for Oklahoma. Note that the loop rate in Texas was $14.10. *OK-KS 271 Order*, ¶ 83 n.245. Thus, the loop rate in Oklahoma was about 34% more than the loop rate in Texas (18.87/14.10 = 1.34). The FCC recognized that the rate difference between the two states might be explained by legitimate cost differences. To evaluate this possibility, the FCC used the HCPM to compute the relative cost of loops in Oklahoma and Texas. The HCPM's estimate of loop costs revealed that the costs in Oklahoma were only about 22% higher than in Texas. Thus, cost differences explained only about two-thirds of the rate difference. While the FCC observed that this rate difference unexplained by cost differences was "not de minimus, and [it could not] ignore its presence," the issue became moot when SBC agreed to cut the loop rate in Oklahoma to $15.70. This lower rate easily passed the TELRIC test.

Q. DID THE FCC APPLY THIS "TELRIC TEST" IN THE MASSACHUSETTS 271 ORDER?

A. Yes. In that *Order*, the FCC used a similar analysis to evaluate Verizon's unbundled switching rates. Because the switching costs in Massachusetts, as determined by the HCPM, were higher than in New York, the FCC found no fault in importing the New York switching rates into Massachusetts.

Q. DOES THE FCC'S ANALYSIS PRODUCE A "POINT ESTIMATE" OF THE TELRIC UNE RATE, OR A ZONE OF REASONABLENESS?

A. The direct application of the test produces a point estimate. However, the equality between the ratio of UNE rates and UNE costs (as determined with HCPM) is not exact. This deviation from exact equality allows for the bounding of reasonable deviations from the point estimate of UNE costs. Thus, in my analysis, the zone of reasonableness is determined by the FCC's historical conclusions about UNE rates, within the context of the 271 proceedings.

Q. HAVE YOU COMPUTED THE FCC'S ANALYSIS FOR QWEST'S PROPOSED UNE RATES?

A. Yes. I performed the test for loop rates, unbundled end-office and tandem switching, and common/shared transport.

Q. PLEASE DESCRIBE THE CALCULATIONS FOR THE LOOP RATES.

A. Texas was the reference state for Oklahoma and Kansas, because Oklahoma and Texas "are adjoining states; because the two states have a similar, if not identical, rate structure for comparison purposes, and because we have already found the rates in Texas reasonable." *OK-KS 271 Order*, ¶ 82. The same justification was used to select New York as the reference state for the Massachusetts' cost comparison. *MA 271 Order*, ¶ 21. Qwest's UNE rates have not been deemed TELRIC compliant by the FCC for any of the states in its region. Thus, we must choose a reference state from one of the five states, or some combination of the states for which have been deemed TELRIC compliant. Since location appears to be an important element of the FCC's choice of the reference state, Texas, Oklahoma, or Kansas qualify on these grounds for a reference state for Arizona. Further,

SBC's UNE rate structure is more compatible with Qwest than is Verizon's rate structure. For example, the rate structure for unbundled switching and reciprocal compensation are very similar between SBC and Qwest states, but not Verizon states.

Q. WHICH OF THE THREE SBC STATES DO YOU USE AS THE REFERENCE STATE?

A. Rather than pick a specific SWBT state as the reference state, I used the average of the three SBC state rates as the reference for two reasons. Using multiple states for the reference allows us to establish a zone of reasonableness.

Q. PLEASE DESCRIBE THE RESULTS OF THE TELRIC TEST FOR UNBUNDLED LOOPS.

A. The UNE loop rates and HCPM cost estimates for loops in Texas, Oklahoma, Kansas, and Arizona are summarized in Table 1. Applying the relative cost framework developed by the FCC to evaluate the TELRIC compliance of UNE rates reveals that Qwest's proposed loop rates are well outside the bounds of TELRIC. Specifically, the HCPM cost estimate for Arizona is below the cost estimates for all three SBC states and the weighted average of the three states. Yet, Qwest's proposed loop rate is more than twice as high as the Texas, Kansas, the weighted average rate, and nearly twice as high as the Oklahoma rate.

Table 1. Rates and Costs for Loops

State	Statewide Average Loop Rate	HCPM Cost Estimate
Texas	14.10	16.61
Oklahoma	15.70	20.48
Kansas	16.20	18.77
Wgt. Average	14.54	17.35
Arizona	28.96	15.87

Proposed Rates	
Lower Bound	12.17
Point Estimate	13.30
Upper Bound	13.70

Q. SO QWEST'S PROPOSED LOOP RATE DOES NOT PASS THE FCC'S TELRIC TEST?

A. Without question, Qwest's proposed loop rates unquestionably flunk the FCC's TELRIC test (when using the reference state chosen here). If the loop rates established in this

proceeding are to be part of a 271 application by Qwest-AZ, then the loop rates need to be reduced to more than half Qwest's proposed rate level.

Q. WHAT LOOP RATE S WOULD SATISFY THE FCC'S RELATIVE COST ANALYSIS?

A. Table 1 also summarizes the zone of reasonableness for loop rates in Arizona. The point estimate loop rate is $13.30, with a lower bound of $12.17 and upper bound of $13.70. Using the implicit percent discounts from Table 1, the deaveraged loop rates are provided in Table 2.

Table 2. Recommended Loop Rates

State	Qwest Proposed Rate	Lower Bound	Point Estimate	Upper Bound
Average	28.96	12.17	13.30	13.70
Zone 1	23.07	9.69	10.59	10.92
Zone 2	28.64	12.03	13.15	13.55
Zone 3	42.14	17.70	19.35	19.94

Additionally, we cannot forget that loop rates even lower than those in Table 2 will be more conducive to competition, and lower loop rates may be justified as TELRIC compliant. Other CLEC testimony may provide support for lower loop rates.

Q. DO YOU RECOMMEND THE COMMISSION ADOPT THESE RATES?

A. Yes. These rates, or rates lower than those in Table 2, are TELRIC compliant for the entire cost of the loop, according to a rate review method designed and employed by the final arbiter of TELRIC compliance, the FCC. Notably, these loop rates are the cost for the entire loop, thus a further downward adjustment is required to account for any positive loop charges for line-sharing.

Q. WHAT ADJUSTMENTS TO DO YOU PROPOSE FOR LINE-SHARING?

A. The testimony of the Qwest witnesses on line sharing is unclear as to what the proposed line-sharing charge of $5 is intended to cover. Two possibilities exist. First, you can interpret line-sharing as the division of the local loop into two distinct parts: a high frequency part and low frequency part. In this context, the two elements are separate, and the charges for these two unique elements should be separate.

Q. HOW DOES THIS VIEW OF LINE-SHARING AFFECT LOOP RATES?

A. If the "cost" of the high frequency portion of the loop is $5, then the cost of the low frequency portion of the loop should be reduced by $5. Qwest's cost model estimates the cost of the entire loop, including both the high frequency and low frequency portions. If we separate the high and low frequencies into two distinct elements, then the full cost of the loop is simply the cost of the high frequency portion of the loop plus the low frequency portion of the loop, or

$$C = c_H + c_L, \tag{1}$$

where the variable C is total cost, c_H is the cost of the high frequency portion of the loop, and c_L is the cost of the low frequency portion of the loop. If the line-sharing charge is $5, therefore, and we use the TELRIC compliant statewide average loop cost from Table 2 ($13.30), then the low frequency portion of the loop cost is

$$c_L = 13.30 - 5.00 = 8.30. \tag{1'}$$

Of course, if the Commission sets a different cost for line-sharing (or the entire loop), then the cost of the low frequency portion of the loop would be different.

Q. DOES THIS REDUCTION IN LOOP COSTS FOR THE LOW-FREQUENCY PORTION OF THE LOOP APPLY ONLY TO THOSE LOOPS WHERE THE LINE IS SHARED, OR ALL LOOPS?

A. The reduction should apply to all loops, or at least those loops that are capable of line-sharing. Under this first interpretation of line-sharing, the high and low frequencies are separated out as different, unique elements. Because the elements are separable, the charges for those elements are separable.

Q. WHAT IS THE ALTERNATIVE INTERPRETATION OF LINE-SHARING?

A. The alternative interpretation holds that the high and low frequencies are not necessarily separable, but that the total loop cost is shared by two services provided over a loop. Thus, if the total loop cost is $13.30, then the low frequency service bears some percentage of the total cost and the high frequency service bears the remaining cost. There are two possible pricing rules given this interpretation of line sharing. The first rule is much like Equation (1), where the low frequency rate is reduced by the line-sharing rate, except the reduction

occurs only for shared loops (not all loops). The sum of rates for each loop equals the cost of loop.

Q. WHAT IS THE SECOND PRICING RULE FOR LINE-SHARING WHERE LOOPS ARE INTERPRETED AS BEING SHARED FACILITIES?

A. The alternative pricing rule computes a weighted average loop rate, reducing the all loop rates by an amount sufficient to offset the total revenue from line-sharing (whether actual or imputed). Mathematically, the relationship is

$$C = p_L + w \cdot p_H, \tag{3}$$

where w is the percent of total lines that are "shared," and p_L and p_H are the rates for the low-frequency and high-frequency portions of the loop. I have assumed that all lines use the low frequency portion of the loop. Importantly, the sum of the low frequency and high frequency rates (p_L, p_H) must equal the total cost of the loop (C).

Q. WHY MUST THE SUM OF THE TWO RATES EQUAL THE TOTAL LOOP COSTS?

A. The goal of TELRIC pricing for UNEs is to replicate what the price would be for an element in a competitive market. In a competitive market, the two prices of two jointly supplied goods – such as the high and low frequency portions of the loop – must sum to the average cost (including a reasonable profit) of the good. The theory of joint supply was a contribution of economist and philosopher John Stuart Mill, who observed in the case of the joint supply of gas and coke:

> The gas and coke together have to repay the expenses of their production, with the ordinary profit. To do this, a given quantity of gas, together with the coke which is the residuum of its manufacture, must exchange for other things in the ratio of their joint costs of production. But how much of the remunerations of the producer shall be derived from the coke, and how much from the gas, remains to be decided. Cost of production does not determine their prices, but the sum of their prices (Principles, pp. 569-570).[1]

The solution to the problem of joint supply, therefore, is that when goods are "produced jointly in fixed proportions, the equilibrium price of each product must be such

as to clear *its* market, *subject to the condition that the sum of the two prices equals their* (average) *joint costs*."[2] Thus, if TELRIC is intended to mimic a competitive market [*Local Competition First Report and Order*, 11 FCC Rcd 15499 (1996), ¶ 679 ("forward looking costs simulates the conditions in a competitive marketplace")], TELRIC does provide guidance on pricing line-sharing.

Q. WHAT IS THE RIGHT CHARGE FOR LINE-SHARING? $5.00 AS QWEST PROPOSES?

A. Probably not. In fact, a straightforward application of the theory of joint products would indicate that the correct loop charge for line-sharing, at least in the near term, should be zero.

To find the appropriate prices for each "product" on the joint facility, one needs to know the demand curves for both the low-frequency and high-frequency portions of the loop. The intersection of the (vertical) sum of these two demand curves with the average cost curve (*i.e.*, TELRIC) establishes the quantity supplied of loops. The prices for the individual "products" are then read off the respective demand curves at the total quantity supplied.

At present, the penetration of telephone service in Arizona is about 93% of total households.[3] Because the demand for line sharing is predicted (by Qwest) to be quite small (3% of total lines), it is unlikely that line-sharing demand will alter the total quantity supplied of loops. Even if line-sharing service were free, no more than about 50% of the total population (the penetration rate for computers) would have any interest in it in the short run. Only if about 95% of loops would be shared at a price of zero should line-sharing have any charge at all. Under the theory of joint products (with competition), any product that does not contribute to quantity supplied, through its affect on the summed demand curve, has a zero price in a competitive market.

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[1] John Stuart Mill, *Principles of Political Economy*. W.J. Ashley (ed.). London: Longmans, 1910.

[2] Robert B. Ekelund, Jr. and Robert F. Hebert. *A History of Economic Theory and Method*, 3rd Ed. New York: McGraw-Hill, 1990 (p. 178, emphasis in original).

[3] *Trends in Telephone Service*, March 2000, Table 17.2, Federal Communications Commission.

Q. DOES QWEST PROPOSE TO SHARE THE COST OF THE LOOP BETWEEN LOW-FREQUENCY AND HIGH-FREQUENCY PORTIONS OF THE LOOP?

A. I do not believe so. While Qwest describes dividing shared loop costs (Million Direct Testimony, p. 66), Qwest does not propose that loop costs be shared at all. Rather, Qwest proposes that it recover the full cost of the loop from the low frequency portion of the loop, and treat the line-sharing charge icing on the cake. In other words, Qwest is attempting to generate a windfall for itself by charging an additional $5 for every shared loop above and beyond the cost of the loop itself. Qwest clearly recognizes that line-sharing does not change the cost of the loop, but is merely a sharing by non-competing uses of a loop facility. Qwest, however, fails to incorporate this fact into its proposed rate structure. If loop costs are to be "shared," then the loop rates and retail rates must be reduced to offset the increase in revenues from the charges for line sharing. Economic theory could not be clearer on this point.

Q. HOW DO YOU PROPOSE TO ADJUST THE LOOP RATES FOR LINE SHARING?

A. As illustrated in Equation (3), I's loop costs need to be adjusted downward by an amount equal to the revenue received for the high frequency portion of the loop, including such charges that I imputes to itself when it provides DSL on a shared loop. In its filing, I estimates that the number line-shared DSL lines will equal about 3% of total access lines in Arizona. Using this (in my opinion, highly conservative) estimate of demand, the $5 proposed rate for line-sharing, a statewide average loop rate of $13.30, and Equation (3), we can compute that the loop rate should be reduced by $0.15 per loop (= 0.03·5.00). This adjustment to rates ensures that I does not over-recover loop costs. Furthermore, as line-shared DSL penetration increases beyond 3% – a likely occurrence, given the emphasis I is making on rolling out this service – the analog loop rate will need to be decreased as well. I suggest that the Commission re-examine this factor every year and order commensurate adjustments.

Q. HAVE YOU PERFORMED THE FCC TELRIC TEST FOR QWEST'S PROPOSED SWITCHING RATES?

A. Yes. The end office switching rates and costs are summarized in Table 3. The average switching rate per-minute includes all end-office switching charges, including the switch port, features, and per-minute rates.

Table 3. Rates and Costs for End-Office Switching

State	Average Switching Rate per Minute	HCPM Cost Estimate
Texas	0.00262	0.00123
Oklahoma	0.00350	0.00141
Kansas	0.00226	0.00153
Wgt. Average	0.00269	0.00129
Arizona	0.00376	0.00138

Proposed Rates	Aggregate	Per-Minute*
Lower Bound	0.00205	0.00049
Point Estimate	0.00289	0.00133
Upper Bound	0.00343	0.00188

* Assumes no change in port or features charges.

The table shows clearly that while the HCPM switching costs are only 7% higher in Arizona than for the reference state, Qwest's proposed switching rates are about 40% higher than the reference state. Thus, Qwest's switching rates should be reduced to satisfy the FCC's relative cost standard.

Q. WHAT SWITCHING RATE WOULD SATISFY THE FCC'S TELRIC TEST?

A. Assuming we target the rate reduction to the per-minute element of switching costs, the Qwest proposed per-minute rate of $0.00226 should be reduced to $0.00133. The lower bound on the TELRIC zone of reasonableness allows for a TELRIC compliant switching rate of $0.00049. This lower bound is nearly identical to the switching rate adopted in Michigan ($0.0005). Recently, BellSouth itself proposed switching rates of less than $0.001 per minute in Florida and Louisiana. Of course, the lower bound is more conducive to competition than are higher rates.

Q. IS A PER-MINUTE SWITCHING RATE OF $0.00133 REASONABLE FOR QWEST?

A. Yes. In fact, a rate as low as $0.0005 is supported by the FCC's TELRIC test method. Further, the Oregon Commission has established a switching rate of $0.00146 for Qwest.

Because the switch port and features charges are lower in Oregon than in Arizona, the per-minute rate in Arizona should be lower than in Oregon. Notably, the FCC has not approved Oregon's rates as TELRIC compliant.

Q. WHAT DOES THE FCC'S RELATIVE COST ANALYSIS SAY ABOUT RATES BETWEEN ARIZONA AND OREGON?

A. The HCPM indicates that switching costs in Arizona and Oregon essentially are identical (Oregon is about 1% more costly). At an Arizona switching rate of $0.00133, the average switching cost per minute is about 10% higher in Arizona than in Oregon. Targeting rate reductions to the per-minute rate as before, reducing the Arizona end-office, per-minute switching rate to about $0.0011 brings Arizona's rates in line with those of Oregon, considering cost differences between the two states.

Q. SHOULD SWITCHING COST REDUCTIONS BE TARGETED TO THE PER/MINUTE COMPONENT OF THE RATE?

A. Yes. Switching costs are primarily traffic insensitive. Thus, it makes sense to reduce the per-minute rate to create a more economically rational price structure. Furthermore, switch ports and features are line sensitive rather than usage sensitive. Because the demand for lines is more stable than for usage, and the growth in lines is more stable than the growth in usage, recovering costs through per-line charges reduces the risk of over- or under-recovery of switching costs.

Q. WHAT SWITCHING RATE DO YOU RECOMMEND?

A. Accepting Qwest's proposed port and features charges, the per-minute switching charge should be about $0.0005 to $0.00133 per minute. Competition unambiguously is better served by a rate of $0.0005.

Q. HAVE YOU PERFORMED THE FCC'S TELRIC TEST FOR TANDEM SWITCHING?

A. Yes. Table 4 summarizes the UNE rates and costs for tandem switching. As shown in the table, tandem-switching costs in Arizona are about half that of the reference state. However, Qwest's proposed tandem switching rates are over twice as high as the reference state (103% higher).

Table 4. Rates and Costs for Tandem Switching

State	Average Switching Rate per Minute	HCPM Cost Estimate
Texas	0.00079	0.00003
Oklahoma	0.00096	0.00003
Kansas	0.00079	0.00007
Wgt. Average	0.00081	0.00004
Arizona	0.00165	0.00002
Proposed Rates		
Lower Bound	0.00024	
Point Estimate	0.00044	
Upper Bound	0.00061	

To satisfy the FCC's TELRIC test, the tandem-switching rate proposed by Qwest needs to be reduced to about 73% of the current rate, or $0.00044 per minute.

Q. WHAT TANDEM SWITCHING RATE DO YOU RECOMMEND?

A. At most, I believe the tandem-switching rate should lie between $0.00024 and $0.00044. Lower rates could be justified. However, fine-tuning the tandem rate at the levels I have recommended will have little effect on the competitiveness of the market because the aggregate tandem-switching costs per customer will be low. However, the move from the non-TELRIC rate of $0.00165 proposed by Qwest to the cost-based rate less than $0.00045 is not trivial to the development of competition. Assuming 500 minutes of tandem traffic per month for a residential consumer, the reduction of tandem switching to TELRIC in Arizona amounts to about 3% on a $20 gross margin.[4]

Q. IS IT POSSIBLE TO USE THE FCC'S RELATIVE COST METHODOLOGY TO EVALUATE QWEST'S PROPOSED SHARED TRANSPORT RATE?

A. Yes. The computation of rates and costs are provided in Table 5. The cost standard from the HCPM model is Common Transport and Common Transport Transmission, expressed in per-minute terms by dividing the sum of these costs by total DEMS.

[4] According to Z-Tel's 10-K, the gross profit margin per line is about $20 per month.

Table 5. Rates and Costs for Shared Transport

State	Average Shared Transport Rate per Minute	HCPM Cost Estimate for Common Transport
Texas	0.000135	0.00004
Oklahoma	0.001647	0.00012
Kansas	0.000988	0.00011
Wgt. Average	0.000425	0.00006
Arizona	0.001573	0.00004
Proposed Rates		
Lower Bound	0.00014	
Point Estimate	0.00030	
Upper Bound	0.00056	

Again, the HCPM estimates the cost in Arizona to be less than in the reference state (and equal to that in Texas), but Qwest's rate is well above the rate for the reference state. The cost of transport in Arizona, according to the HCPM, is about 30% less than in the reference state, yet Qwest's proposed rate is nearly 370% higher than the reference state.

Q. WHAT SHOULD THE TRANSPORT RATE IN ARIZONA BE?

A. To satisfy the FCC's TELRIC test, the transport rate should be reduced to $0.0003. This reduction in rates clearly satisfies the FCC's relative cost analysis, and reduces the cost of transport services for CLECs by about $1.27 per month for every 1,000 minutes of transport purchased. Thus, by reducing the transport rate, both aspects of the analytical framework are satisfied: the rate is TELRIC compliant and promotes competition.

Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A. Yes.

SUMMARY OF TESTIMONY AND SURREBUTTAL OF GEORGE S. FORD

SUMMARY

The purpose of my testimony is to assist the Commission in making decisions that are critical and central to the development of local exchange competition in Arizona. These same decisions also are critical to Qwest's future Section 271 application before the Federal Communications Commission ("FCC").

My testimony is divided into three parts:

First, I provide the Commission an analytical framework for establishing TELRIC compliant rates that will promote competitive entry in Arizona. Evidence in this proceeding is likely to provide a range of "TELRIC compliant rates" from which the Commission must select. As a result, the Commission will need to go beyond mere "number-crunching" and must instead provide a reasoned basis, consistent with the purposes of the 1996 Act, for selecting a rate from the TELRIC "zone of reasonableness." The Commission should select TELRIC rates from the lower part of this range because that decision will promote the availability of new services in Arizona from new, competitive entrants.

Second, I discuss how the FCC will review the rates adopted in this proceeding in a Qwest Arizona Section 271 application. In recent Section 271 orders, the FCC has explicitly laid out the manner in which it determines whether UNE rates are TELRIC compliant. The FCC's decisions discuss how the FCC will establish the TELRIC "zone of reasonableness" for UNEs. In my testimony, I set forth this analysis in order to assist the Commission and Qwest, which undoubtedly should care whether its UNE rates will pass the FCC's analysis.

Third, I perform the FCC's "TELRIC test" for unbundled loops, unbundled local switching, unbundled tandem switching, and unbundled shared transport. This analysis reveals that Qwest's proposed rates for these UNEs will, without question, fail the FCC's

TELRIC test. Indeed, the rates for these UNEs are 30%-420% higher than the FCC's analysis would permit. The loop and switching rates proposed by Mr. Dunkel, witness for the Commission staff, however, pass the TELRIC test and should be given greater weight by the Commission.

In addition, my discussion of unbundled loops includes a short discussion of the impact of Qwest's proposed rate for line-sharing as well as the efficacy of Qwest's line-sharing rate proposal. If a positive price is charged for the high frequency portion of the loop, then the rate for the low frequency portion of the loop rate must be reduced so that loop costs are not over-recovered. A simple formula that computes the loop rate reduction is provided in my testimony. Importantly, though mishandled by virtually every piece of testimony in this proceeding, line-sharing is "sharing." Thus, if a positive price is charged for the high-frequency portion of the loop, then the rate for the low-frequency portion of the loop must be reduced to avoid the over-recovery of loop costs. When adjusting rates to account for a positive charge for line-sharing, the Commission should focus only on the unbundled loop rate, ignoring Qwest's retail revenues.

SURREBUTTAL

Two Qwest witnesses responded to my testimony: William Fitzsimmons and Garrett Fleming. As discussed in detail below, Dr. Fitzsimmons' responses to my testimony are an amalgam of misquotes and self-contradicting arguments. Mr. Fleming, while providing an excellent description of the relevance of my testimony, likewise misrepresents my position and fails an attempt to replicate the analysis contained in my testimony. The respondents will be dealt with in turn.

Response to William Fitzsimmons

(i) An Analytical Framework for Determining UNE Rates

First, Dr. Fitzsimmons states that I advocate "setting prices for unbundled network elements (UNEs) at levels that will 'provide a springboard to a competitive future.'" [Fitzsimmons Rebuttal at 4] As an initial matter, this particular quote is not from my

testimony. More importantly, my testimony clearly sets forth the opinion that the Arizona Commission has a two-fold obligation in setting UNE rates: (i) UNE rates must comply with the TELRIC standard; and (ii) UNE rates should be set such that the overarching goal of the *Telecommunications Act of 1996* – promoting competition in all markets. In much of his response to my testimony, Dr. Fitzsimmons has chosen to ignore the first part of my two-part analytical framework. Once the first part of the framework is recognized, most of Dr. Fitzsimmons' responses are rendered moot.

As an example, consider Dr. Fitzsimmons' statement,

> Dr. Ford says that "the analysis is simple: lower UNE rates promote competition, higher UNE rates deter competition." This facile view misses the essence of this proceeding. It is not to assist the entry of competitors with rock-bottom prices that fail to compensate Qwest for the use of its network by competitors (sentence fragment in original).

[Fitzsimmons Rebuttal at 7] Dr. Fitzsimmons' quotation from my testimony is taken out of context and misconstrues the point. To illustrate, consider my testimony that states:

> ... the TELRIC standard establishes a zone of reasonableness, not a particular rate. Once the boundaries of the 'zone of reasonableness' are set, the second order of business is to choose rates from that part of the 'zone of reasonableness' for which entry is most feasible. In some cases, it may be that costs are simply too high to induce entry, even at the low end of the 'zone of reasonableness.' In other cases, however, entry may feasible for some part of the 'zone of reasonableness' but not for others. It is imperative that this Commission consider the entry impact of the selection UNE rates. The analysis is simple: lower UNE rates promote competition, higher UNE rates deter competition.

[Ford Direct at 8]

Clearly, my testimony recommends that any rate chosen by this Commission should, at a minimum, satisfy TELRIC principles. That said, it is important to recognize that a number of UNE rates satisfy TELRIC and these rates define the TELRIC "zone of

reasonableness." Once the TELRIC "zone of reasonableness" is determined, the second part of my analytical framework provides guidance on choosing a specific rate from within that zone. Among a choice of TELRIC compliant rates, choosing from the lower TELRIC compliant values is more conducive to competitive entry. Conversely, choosing rates from the higher part of the range demonstrates a preference for preserving the status quo at the expense of ensuring that consumers reap the benefits of competition.

The fact that Dr. Fitzsimmons has misrepresented my position is made most clear by my response to the question "Should rates be established solely to induce competitive entry?" My answer was:

> No. The Act establishes two standards for rates. First, UNE rates must be set at costs, which (in practice) implies they must comply with the FCC's TELRIC pricing rules. The establishment of rates conducive to competitive entry is the second, not the only, criterion. The FCC clearly stated that the reasonableness of rates is not determined by the business case of potential entrants ("incumbent LECs are not required ... to guarantee competitors a certain profit margin." *OK-KS 271 Order*, ¶ 65). Satisfying the TELRIC standard is, I believe, the first order of business."
>
> However, the TELRIC standard establishes a zone of reasonableness, not a particular rate. Once the boundaries of the 'zone of reasonableness' are set, the second order of business is to choose rates from that part of the 'zone of reasonableness' for which entry is most feasible.

[Ford Direct at 8]

My two-part analytical framework is valid and clearly described in my testimony. The fact that Dr. Fitzsimmons has distorted and misstated my position is apparent and his criticisms are largely irrelevant. Most policymakers would agree that promoting competition is an important consideration in establishing UNE rates.

Dr. Fitzsimmons' distaste for considering the effects of this proceeding on competition is particularly odd given the logic contained in his own testimony. Rather

than promoting competition, Dr. Fitzsimmons asserts the goal of policy is the "promotion of the investment and innovation (at 5 and 9)." He goes on to say, "[a] fundamental economic concept underlying the decision to transform local telecommunications into a competitive market is that competition will provide the proper incentives for more efficient investment and innovations (at 6)." Thus, according to Dr. Fitzsimmons, in order to promote "investment and innovation" we must promote competition, because competition provides the proper incentives for efficient investment and innovation. Dr. Fitzsimmons' claim that promoting competition is "contrary to the fundamental goal of public policy," therefore, is rejected by his own testimony.

Consistent with the misrepresentation theme of his rebuttal testimony, Dr. Fitzsimmons' relies on an FCC Order to support his position that:

> A central goal of telecommunications public policy is the promotion of the investment and innovation necessary to maintain a dynamic and modern network capable of providing high quality, ubiquitous services to consumers at affordable prices.

[Fitzsimmons Rebuttal at 5] The paragraph cited by Dr. Fitzsimmons in support of his position actually reads:

> One of the fundamental goals of the Telecommunications Act of 1996 (the 1996 Act) is to promote innovation and investment by multiple market participants in order to stimulate competition for all services, including broadband communications services. In this Report, we consider the deployment of broadband capability – what Congress has called "advanced telecommunications capability."

FCC, CC Docket No. 98-146, Released Feb. 2, 1999, ¶ 1 (emphasis added).

In this paragraph, the FCC claims that the promotion of "innovation and investment by multiple market participants" will "stimulate competition for all services." Clearly, the FCC considers the presence of multiple market participants and the stimulation of competition as important policy considerations. Further, the FCC's

position here contradicts that of Dr. Fitzsimmons. The FCC asserts that "innovation and investment by multiple market participants" stimulates competition, not that competition stimulates innovation and investment. My two-part framework for establishing UNE rates has clear implications for the realization of "multiple market participants," and appears to be most consistent with the FCC's position on regulatory policy in the telecommunications industry.

There are many more misinterpretations of my testimony in Dr. Fitzsimmons' responses. For example, he observes, "Carefully considering values for inputs and running a model with these inputs is not, as Dr. Ford suggests, a willy-nilly process." [Fitzsimmons Rebuttal at 9] To evaluate Dr. Fitzsimmons point, consider the entire statement from my filed testimony:

> It is important that the Commission have an analytical framework within which to evaluate proposed UNE rates. Without such a framework, rates will be determined willy-nilly and may bear neither a relationship to cost nor conducive to competitive entry – the dual standards of the *Telecommunications Act of 1996*.

[Ford Direct at 4] What is this analytical framework? My testimony states:

> There are two primary elements in the analytical framework. First, as described in detail by the testimony of Qwest witness Theresa K. Million, the TELRIC standard provides one element of this analytical framework. The second element of the analytical framework – as important as the first – holds that the rates established in this proceeding should satisfy, to the greatest extent possible, the mandate of the *1996 Telecommunications Act* to promote competition in all telecommunications markets.

[Ford Direct at 5] How is TELRIC determined? Again, consider my testimony:

> In most cases, the input values recommended by the various parties to this proceeding will be supported by expert testimony and based, though sometimes loosely, on a reasoned analysis. There should be sufficient evidence on the

> record to expose those cases where recommendations are void of any merit or are inconsistent with TELRIC.
>
> Facing a menu of model assumptions and input values, the Commission will be forced to conclude that, in general, there is no single "right" number but a range of "right" numbers. The first step of the analytical framework defines what this range of "right" numbers is, thereby establishing the TELRIC 'zone of reasonableness.' This step is the first step of the analytical framework.

[Ford Direct at 10]

Clearly, it is not my position that the careful choice of inputs and algorithms for the model is a "willy-nilly process" as Dr. Fitzsimmons claims. Instead, his response to my testimony is based on a misrepresentation of my position. My testimony makes clear my position that this proceeding should be motivated by two goals: (i) setting UNE rates according to TELRIC principles and (ii) promoting competition in Arizona.

(ii) The FCC's TELRIC Test

Undoubtedly, Qwest will use the rates established in this proceeding in support of its future 271 application for the State of Arizona. If the FCC determines that the UNE rates set in this proceeding are not TELRIC-compliant, then Qwest must "voluntarily" reduce those rates to TELRIC levels prior to approval. Such "voluntary" reductions in UNE rates were components of the Oklahoma, Kansas, and Massachusetts 271 proceedings before the FCC.

Recognizing the inextricable link between this proceeding and Qwest's future 271 application, most of my testimony is devoted to estimating the boundaries for TELRIC compliance using methods developed and implemented by the FCC in previous 271 proceedings. As noted by Dr. Fitzsimmons: "Dr. Ford's version of the TELRIC compliance test was derived from the test that the FCC used in negotiations with SBC and Verizon prior to granting interLATA relief in several states." [Fitzsimmons Rebuttal

at 20] The FCC has employed the TELRIC compliance test for the last three states receiving 271 approval, so the test's relevance is indisputable.

Nonetheless, Dr. Fitzsimmons questions the validity of my application of the TELRIC test to Qwest–Arizona. Although, he questions the cross-company comparisons made in my TELRIC test, his criticism is without merit. The FCC specifically has rejected the relevance of company-specific information in the determination of forward-looking cost for an efficient provider.[1] Furthermore, because no Qwest state has received 271 approval, extending the information on TELRIC compliance from past 271 proceedings to Qwest seems reasonable.

Dr. Fitzsimmons also asserts that comparing rates across geographically dissimilar markets is invalid. I disagree, and the bulk of the evidence supports comparisons across markets that differ geographically. Every TELRIC model is designed to take into account geographic similarities and dissimilarities. Indeed, the recognition of state differences in costs is the motivation for the TELRIC test, which compares cost-adjusted rates across states. The FCC's Synthesis Model employs state-specific information in its calculations and adjusts the costs accordingly. If a model can compare Texas to Oklahoma and New York to Massachusetts, then it is inconceivable that the model would fail to accurately compare New York to Texas. Either the model adjusts for geography, or it does not. The FCC has concluded the Synthesis Model "provides a reasonable basis for comparing cost differences between states (OK-KS 271 Order, ¶84)." Third, the states I employed in the TELRIC test for Arizona were Texas, Oklahoma, and Kansas.

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[1] *Federal-State Joint Board on Universal Service, Forward-Looking Mechanism for High Cost Support for Non-Rural LECs*, Tenth Report & Order, CC Docket Nos. 96-45, 07-160, FCC 99-304 (rel. Nov. 2, 1999).

These states are the most geographically proximate to Arizona of all the 271 approved states and are the most similar in terms of the distribution of lines across density zones.[2]

As a third criticism, Dr. Fitzsimmons asserts, "Dr. Ford includes UNE prices from Oklahoma and Kansas in his analysis. This introduces a second order error akin to the reduction of clarity caused by re-faxing a fax." [Fitzsimmons Rebuttal at 22] He goes on to reject his own argument, however. According to Dr. Fitzsimmons only those rates that have "already been found by the FCC to be reasonable" can be included in the TELRIC test. [Fitzsimmons Rebuttal at 22] Dr. Fitzsimmons also observes,

> "[a]s part of the approval process for Verizon and SBC to provide interLATA service in Oklahoma and Massachusetts pursuant to section 271 of the Telecommunications Act, the FCC applied a test to determine if the agency was satisfied that certain of the companies' UNE price were in compliant with TELRIC."

[Fitzsimmons Rebuttal at 20-1] As Dr. Fitzsimmons admits, therefore, the FCC found the UNE rates in Oklahoma to be TELRIC compliant. It is also indisputable that the loop rates in Kansas clearly satisfied the TELRIC test. Thus, the rates in Oklahoma and Kansas are TELRIC compliant (according to the FCC) and, consequently, there is no re-faxing problem associated with the use of those rates in the TELRIC test; a TELRIC compliant rate is a TELRIC compliant rate. In any case, removing the rates for Oklahoma and Kansas from the analysis does not materially change the rates recommended for Arizona.[3]

Finally, Dr. Fitzsimmons concludes that my TELRIC test must be flawed because "[t]he loop rate recommended by Dr. Ford as a result of his version of the compliance test

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[2] Based on the Density Zone data from the FCC's Hybrid Cost Model, the mean absolute percent error across density zones between Arizona and the five states with 271 approval are: New York (83%), Massachusetts (50%), Kansas (42.5%), Oklahoma (43%), and Texas (24.6%).

[3] If only Texas is used for the TELRIC test it is not possible to establish upper and lower bounds; only a point estimate is generated from the TELRIC test with only one reference state.

is clearly below the forward-looking cost of the loop." [Fitzsimmons Rebuttal at 23] As proof of this assertion, Dr. Fitzsimmons compares my estimate of loop cost ($13.30) to his estimate (nearly $20). Dr. Fitzsimmons conveniently ignores the estimates of loop cost by Mr. Dunkel ($12.35/$13.60) and AT&T ($10.11). His assertion that my proposed loop cost is too low hinges on one critical assumption--that his own estimate is correct. There is sufficient evidence on the record to question the validity of that assumption.

(iii) Line-Sharing and Loop Rates

Notably, no Qwest witness responds to my testimony on line-sharing, which stands as the best explanation on the record of the economic theory of pricing under joint supply in competitive markets. A related response, though not directed at my testimony, is Dr. Fitzsimmons' observation:

> To my knowledge, no intervenors in this proceeding provide ... analysis that demonstrates how amortized loop costs are being recovered with current revenues from current customers.

[Fitzsimmons Rebuttal at 63] Whether or not "current revenues from current customers" covers amortized loop costs is entirely irrelevant to the issue of line-sharing and the price of the high-frequency portion of the loop. Qwest's retail service offerings are immaterial to the proper treatment of line-sharing and loop charges. For the provider of unbundled elements, only two services are sold: the low-frequency and high-frequency portions of the loop. If the average total cost (including overhead and reasonable profit) of the loop is determined to be, say, $13.00, then the revenue from that loop should be $13.00. If Qwest receives $13 per loop and also receives $5 for the high frequency part of some loops (including those sold to itself), then Qwest has over-recovered the cost of the loop. Over-recovery violates the theory of joint-supply under competition, which states that the revenue from the loop (across all products provided by the loop) must equal the average (economic) cost of the loop. [*See* Ford Direct at 17-18] To remedy this over-recovery, the UNE loop rates must be reduced to avoid excess recovery of loop costs. The method

by which this reduction is computed is provided in my testimony. The line-sharing penetration implicit in Mr. Dunkel's allocation of line-sharing OSS costs should be used in the computation.

Response to Garrett Fleming

Mr. Fleming begins his response to my testimony by noting that my two-part analytical framework is neither required by the Act nor proposed by the FCC. Yet, Mr. Fleming observes that the "Act specifically delegates the task of setting UNE prices to state Commissions." If it is the task of the state Commission to set UNE rates, as Mr. Fleming contends, then it does not matter whether or not the Act included, or the FCC employs or recommends, my two-part framework. Indeed, the testimony to which Mr. Fleming is responding is testimony before a state Commission, and this Commission is perfectly free to consider as much or as little information as possible in setting UNE rates.

I do not argue in my testimony that UNE prices should be set at the "bare minimum" of the TELRIC range as Mr. Fleming contends. However, my testimony does make the observation that choosing lower TELRIC estimates over higher estimates certainly is more consistent with the over-arching goal of the Act and, presumably, the goal of the Commission (*i.e.*, to promote competition). Moreover, the Commission will send a clear message that it intends to bring the benefits of competition to consumers by choosing rates from the lower end of the permissible range.

Mr. Fleming accuses me of "selectively [applying] the TELRIC test to derive his desired results." [Fleming Rebuttal at 16] Mr. Fleming's accusation is baseless. The TELRIC test is a procedure developed by the FCC in its Section 271 process. The Commission should expect that the FCC will perform this test for a Qwest Arizona application. My testimony describes the FCC calculations, reproduces those calculations for a number of states, and reports the results. There was no "desired result" other than

informing Qwest and the Commission what the FCC's TELRIC test establishes as a reasonable range for UNE rates in Arizona.

There were five potential states that could be included in the analysis: I included three. Let me explain why certain states were selected as elements of the reference state. First, including Texas, Oklahoma, and Kansas as reference states was based on the relative geographic proximity of those states to Arizona, particularly in relation to New York and Massachusetts.[4] Along those same lines, based on the Density Zone data from the FCC's Hybrid Cost Model, comparing teledensity between Arizona and the five states with 271 approval suggests Kansas, Oklahoma, and Texas are more similar to Arizona in terms of teledensity than are either Massachusetts or New York. The mean absolute percent errors of line density across density zones are: New York (9.2%), Massachusetts (5.6%), Kansas (4.7%), Oklahoma (4.8%), and Texas (2.7%). Second, and perhaps more importantly, the UNE rates in New York and Massachusetts are currently under review. Recently, the Administrative Law Judge in New York proposed rate reductions for switching elements of about 50%, and those reductions likely will flow through to Massachusetts. When those cost proceedings are complete, adding New York and Massachusetts to the analysis (as recommended by Mr. Fleming) would be (in my view) a reasonable extension of the TELRIC test described in my testimony. Also, the SBC and Qwest states employ "bill-and-keep" for reciprocal compensation; Verizon does not.

Mr. Fleming further asserts that I recommend that the Commission abandon TELRIC principles for the TELRIC test. There are two problems with Mr. Fleming's assertion. First, I did not recommend the Commission make such a substitution. My responses to Dr. Fitzsimmons on this point reflect my true position, as does the following quote from my testimony:

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[4] The model fully accounts for geographic differences, so the FCC's position on this point is a bit of mystery.

> Facing a menu of model assumptions and input values, the Commission will be forced to conclude that, in general, there is no single "right" number but a range of "right" numbers. The first step of the analytical framework defines what this range of "right" numbers is, thereby establishing the TELRIC 'zone of reasonableness.' This step is the first step of the analytical framework.
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> Once these boundaries are established, the second part of the analytical framework is to be applied. Each input value, assumption, or resultant cost estimate should be classified according to its effect on competition. Because higher UNE rates reduce competition and lower UNE rates increase competition, assumptions and/or input values that increase the cost estimates decrease competition and those that decrease cost estimates increase competition. The final input values and assumptions accepted by the Commission should be chosen so that competitive entry is viable, *i.e.*, from that part of the "zone of reasonableness" associated with lower costs. The second part of the framework is certainly easier to implement than the first.

[Ford Direct at 10] Clearly, I do not recommend the Commission abandon TELRIC.[5]

Second, while I recommend the Commission adhere to TELRIC principles, the FCC's 271 Orders clearly state that a "range" of rates is permissible and that strict adherence to TELRIC is not required. In the Oklahoma-Kansas 271 Order, the FCC observes" [w]hile the loop rates were not derived in total compliance with our TELRIC rules, this flaw is not fatal to SWBT's application. The discounts now available in Oklahoma compensate for the ALJ's use of a fill factor that was not compliant with TELRIC. ...[W]e find that the discounted rates currently available are within a range that could be obtained by using TELRIC. (*OK-KS Order*, ¶ 87)." The FCC makes clear that how the rates are derived is less important than whether the UNE rates "are within

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[5] My position that a number of inputs are reasonable is supported by the FCC's statement in the Oklahoma-Kansas 271 Order: "we have determined that standard to mean that any of a number of inputs or results from within a certain range could be appropriate (OK-KS 271 Order, ¶ 91)".

the range that TELRIC would produce (OK-KS 271 Order, ¶ 86)." Determining whether or not a UNE rate was "within the range that TELRIC would produce" was the specific task of the FCC's TELRIC test. Thus, both the Oklahoma-Kansas and Massachusetts 271 Orders reject Mr. Fleming's contention that the FCC requires "states to set the prices for UNEs based on TELRIC principles." [Fleming Rebuttal at 18] Neither the loop rate in Oklahoma nor the switching rates in Massachusetts were the product of a TELRIC model. Both sets of rates, however, were deemed TELRIC compliant by the FCC based on the application of the TELRIC test to those rates.

While Mr. Fleming encourages, at times, the wholesale rejection of my testimony, Mr. Fleming makes the utility of my testimony clear when he observes:

> The FCC developed the test solely as a means for assessing the reasonableness of a company's UNE prices when those prices were based on assumptions or inputs that did not comport with the TELRIC rules. If the FCC determines that a state Commission erred in its application of TELRIC principles, the FCC uses the test to assess whether the error was so grievous as to result in a price that is outside the range that the reasonable application of TELRIC principles would produce. In other words, it is a test that the FCC uses to determine if a misapplication of TELRIC principles has resulted in prices that are outside a reasonable range.

[Fleming Rebuttal at 18]

If the FCC uses the TELRIC test "to determine if a misapplication of TELRIC principles has resulted in prices that are outside a reasonable range," then I would think it would be extremely useful for this Commission to know now, while the proceeding is underway, the upper and lower bounds of this "reasonable range" of TELRIC prices. Providing that information is exactly the purpose of my testimony.

Mr. Fleming also argues that the rate structures among the states are too variable to allow comparisons using the TELRIC test. I disagree. First, the FCC seeks rate structures that are similar, not identical. The rate structure for loops, for example, differs hardly at all (if any) among the states. Likewise, tandem switching is not an element subject to complex rate structures. Non-recurring charges differ more substantially

across states, but my testimony does not address non-recurring charges. Second, the examples of differences provided by Mr. Fleming are irrelevant to the validity of the TELRIC test. Specifically, the TELRIC test uses statewide average rates, so the extent of deaveraging of rates is irrelevant. Observing that Arizona is the only state in the sample charging separately for the switch port and port features is indeed important, but not for the reasons Mr. Fleming asserts. These separate charges increase the cost of switching and contribute to Qwest's gross overstatement of switching rates in Arizona. Discovering this problem is exactly the purpose of the TELRIC test. Application of the test in Arizona reveals quite clearly that a "misapplication of TELRIC principles has resulted in prices that are outside a reasonable range" – the purpose of the test agreed to by Mr. Fleming.

Differences in rate structures across states do exist. In the context of the TELRIC test, most of these differences are handled easily by creating price and cost indicia, which is the approach I adopt for unbundled end-office switching. Including multiple states in the TELRIC test so that boundaries are generated, rather than specific rates, also accounts for differences across states in rate structure.

Finally, Mr. Fleming attempts to replicate the TELRIC test and make some adjustments to the specific states included in the analysis. This effort is indeed peculiar given his admittance that he has "not been able to replicate Mr. Ford's HCPM cost results." [Fleming Rebuttal at 16][6] In any event, an examination of his results shows that

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[6] The computation of average loop costs from the HCPM is straightforward, and the calculations and data sources were provided in Z-Tel response to WD-2-1. The HCPM files provide line count and loop cost estimates by wire center. From these two variables, the weighted average loop cost can be calculated. Overhead expense, provided in Cell C33 of the "Per Line" sheet (described as "Variable Overhead" under the heading "Annual Per-Loop Expense") of the HCPM output file available (free of charge) from the FCC website. The overhead expenses is adjusted by the formula applied to the "Summary" worksheet of the HCPM output: [Sum(H3:AA3) + Sum(AE3:AI3)]/CF3 (as noted in WD-2-1). The FCC provided this specific calculation to me.

he did not replicate my analysis, which explains his differing results. First, in comparing loop rates across states, Mr. Fleming has included the costs of switching components.[7] [Fleming Table 2] Obviously, switching costs are irrelevant to the determination of loop costs. Second, if New York, Massachusetts, Kansas, and Texas are used as the reference states, the point estimate for the loop rate in Arizona is about $14.57 (not $16.08 as Mr. Fleming claims), with a lower bound of $13.47. If all 271 approved states are included in the analysis, the point estimate is $14.39, with a lower bound of $12.17. Thus, the results of the TELRIC test are not substantially altered by the inclusion of all 271 approved states (approximately an 8% increase in the recommended loop rate and no change in the lower bound). As mentioned above, including New York and Massachusetts in the analysis is perhaps unwise given that UNE rates in those states are currently under review and most likely will change in the very near future.

Mr. Fleming's inclusion of New York and Massachusetts in the switching cost comparison is clearly inappropriate. Interestingly, by Mr. Fleming's own standards, Massachusetts should not be included because the switching rates in Massachusetts were not the product of a TELRIC model, but were adopted from New York. Thus, Massachusetts switching rates are subject to the same "circularity" that Mr. Fleming contends plagues the Oklahoma loop rate.[8] [Fleming Rebuttal at 27] Furthermore, in the current cost proceeding in New York, initiated in part due to Bell Atlantic's "careless errors" regarding switching costs that were "distressing and disruptive of the process," the Recommended Decision of the ALJ mandated switching cost reduction of about 50%. Recommended Decision by Administrative Law Judge Joel A. Linsider, Case 98-C-1357, May 16, 2001.

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[7] In the HCPM, the "Total Basic Local Svc Cost" includes switching elements in addition to loop costs.

[8] Interestingly, the $3.24 switching cost cited in Mr. Fleming's testimony is based on a comparison with Massachusetts.